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RESOURCE CONSERVATION AND RECOVERY ACT FACILITY INVESTIGATION (RFI) REPORT

FORMER GENERAL MOTORS
POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

MID 980 587 893

Prepared for: RACER

Conestoga-Rovers & Associates
14496 Sheldon Road, Suite 200
Plymouth, Michigan 48170

September 2013 • #017358
Report Number:23

Based on my knowledge of the conditions of the property described in the remedial action plan and my inquiry of the person or persons who manage the system referenced in the operator's certification, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Grant Trigger
Michigan Cleanup Manager
Revitalizing Auto Communities
Environmental Response Trust

8-29-13
Date

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LIST OF ACRONYMS AND TERMS

AOI	Area of Interest
COC	Constituents of Concern
CCR	Current Conditions Report
CRA	Conestoga-Rovers & Associates
GSI	Groundwater Surface Water Interface
LIF	Laser Induced Fluorescence
LNAPL	Light Non-Aqueous Phase Liquid
MDEQ	Michigan Department of Environmental Quality
PCBs	Polychlorinated Biphenyls
PCE	Tetrachloroethene
QAPP	Quality Assurance Project Plan
RACER	Revitalizing Auto Communities Environmental Response Trust
RCRA	Resource Conservation and Recovery Act
RFI	RCRA Facility Investigation
Site	Former General Motors Powertrain Willow Run
SVOCs	Semi-Volatile Organic Compounds
VOCs	Volatile Organic Compounds
WWTP	Waste Water Treatment Plant

1.0 INTRODUCTION

Conestoga-Rovers & Associates, Inc. (CRA) has prepared this Resource Conservation and Recovery Act (RCRA) Facility Investigation (RFI) Report for the former General Motors Powertrain Willow Run (Site) located in Ypsilanti, Michigan. The United States Environmental Protection Agency Identification number associated with the RCRA Corrective Action at this Site is MID 980 587 893. A Current Conditions Report (CCR) (CRA, July 2011) was prepared for the Site to summarize historical operations, previous investigations, and remedial activities completed through September 2010, and evaluate existing data with respect to applicable criteria. Additional field work was completed between October 2010 and June 2013 to further investigate data gaps. This RFI Report presents the results of the Site investigations completed since the submittal of the CCR. In order to minimize the length of report and discussion, this report primarily uses tables and figures to provide investigation results. For additional Site background information, refer to the CCR, the RFI Work Plan (CRA, February 2012), or the RFI Work Plan Addendum 1 (CRA, March 2013).

2.0 INVESTIGATION PROGRAM

The field efforts conducted between October 2010 and June 2013 included:

- Light Non-Aqueous Phase Liquid (LNAPL) Investigation
- Groundwater and LNAPL Level Monitoring
- RFI field investigations – soil, groundwater and soil gas

2.1 LNAPL INVESTIGATION

Between October 2010 and the end of 2011, an investigation was conducted to delineate and assess the potential mobility and recoverability of the LNAPL present at the Site. This work included the following tasks:

- Site-wide laser induced fluorescence (LIF) survey
- Site-wide soil core sampling and petrophysical testing program
- Estimation of LNAPL transmissivities
- Examination of historical well gauging data

Figure 2.1 presents the extent of LNAPL impacts based on the results of this investigation. Additional discussion, supporting data, and conclusions from this investigation are included in the LNAPL Delineation, Mobility, and Recoverability Study Report which was submitted as draft to the Michigan Department of Environmental Quality (MDEQ) in July 2012. This report is provided in Appendix A.

2.2 GROUNDWATER AND LNAPL LEVEL MONITORING

During this reporting period, three annual (2011, 2012 and 2013) and one semi-annual (2012) groundwater and LNAPL level monitoring events were conducted. The annual events consisted of recording depth to water and LNAPL (if present) in all known existing Site wells. The semi-annual event only included wells considered perimeter to the LNAPL body to monitor any migration of the LNAPL boundaries. Figure 2.2 shows LNAPL boundaries based on detectable in-well thickness from 2008 to 2012 including levels data collected during these monitoring events.

Groundwater flow at the Site is influenced by utility corridors, steam tunnels, and various pits, sumps and flumes that continue to be dewatered as part of plant maintenance. Groundwater at the Site subsequently has an inward gradient, flowing

south, southeast in the northern portion of the Site and northward in the southern portion. Several localized lows were identified. Groundwater contours for the shallow, intermediate and deep zones based on levels recorded from 2011 to 2013 are shown on Figure 2.3 (2011), Figures 2.4 – 2.6 (2012) and Figures 2.7 – 2.9 (2013). The shallow groundwater contours are consistent between 2011, 2012, and 2013 (Figures 2.3, 2.4 and 2.7). Intermediate and deep levels were not available in 2011, but these contours are consistent between 2012 and 2013 (Figures 2.5, 2.6, 2.8 and 2.9).

2.3 RFI FIELD ACTIVITIES

In the spring of 2012 the RFI Work Plan was implemented. The Work Plan was prepared to further investigate and address data gaps based on the investigations completed at the Site. Activities included:

- Investigation of soil impacts throughout the Site
- Investigation of shallow and intermediate zone groundwater quality outside of the extent of LNAPL impacts
- Investigation of subsurface geology, in particular, the intermediate sand layer and deep sand layer(s), if present
- Investigation of deep aquifer quality at perimeter of Site
- Determination of the Site-specific background metals concentrations in soil and groundwater
- Investigation of data gaps at several Areas of Interest (AOIs) that had not historically been investigated

A copy of the Work Plan was provided to the MDEQ in February 2012. Activities proposed in this Work Plan were completed as proposed with a few exceptions as indicated in Table 2.1.

In the spring of 2013 the RFI Work Plan Addendum No. 1 was implemented. The Work Plan Addendum No. 1 was prepared to delineate the exceedances of concern detected during the Work Plan efforts and conduct a second round of groundwater sampling. Activities included:

- Completion of four soil borings to delineate manganese exceeding Part 201 Non-Residential Particulate Soil Inhalation Criteria in the south-west corner of the plant

- Completion of one soil boring to delineate arsenic exceeding Part 201 Non-Residential Direct Contact Criteria
- Completion of four soil borings to delineate tetrachloroethene (PCE) exceeding Part 201 Non-Residential Volatilization to Indoor Air Inhalation Criteria at the southern property boundary near Building 19
- Installation of one shallow monitoring well to delineate PCE in the shallow water bearing zone near the soil exceedance at the southern property boundary near Building 19
- Completion of second round of groundwater sampling at existing wells sampled in 2012 and first round of groundwater sampling at the newly installed well

A copy of the RFI Work Plan Addendum 1 was provided to the MDEQ in March 2013. Activities proposed in this Work Plan were completed as proposed with a few exceptions as indicated in Table 2.1.

RACER is currently in negotiations with the Wayne County Airport Authority to finalize a property transaction in which RACER would acquire the land parcel used by the waste water treatment plant (WWTP) and the Airport Authority would acquire a portion of the northeast parking lot. The land the airport would acquire is denoted on the drawings as the "Property Swap Area." The investigation activities proposed for the area yet to be acquired by RACER surrounding the WWTP will not be conducted until the real estate transaction is finalized.

The results of the RFI investigations are discussed in Section 3.

3.0 INVESTIGATON RESULTS

3.1 SITE GEOLOGY

The investigations completed during this reporting period provide a more complete understanding of the Site lithology than presented in the CCR. Borings advanced to 25 and 100 feet allowed a limited interpretation of the extent of an intermediate and deep water bearing zone at the Site. Detailed stratigraphy logs were completed for each borehole and monitoring well installed. The stratigraphy and monitoring well completion logs for the locations completed in 2012 and 2013 along with photographs of the deep well soil cores are provided in Appendix B.

In addition to these boring logs, differences in lithology were interpolated from nearby LIF results. Conductivity readings were collected during the LIF investigation conducted as part of the LNAPL study (see Appendix A). By comparing several locations where LIF and boring logs were collected in close proximity, an inverse relationship between sediment size and conductivity was established (i.e., conductivity readings were relatively high in a clay matrix and dropped when a silt layer was encountered). Using this relationship, additional geologic contacts were extrapolated.

Six cross sections were completed for the Site based on the interpretations of the new and historic boring logs and the extrapolation from the LIF conductivity readings. The contacts from the LIF readings are dashed to indicate the somewhat interpretational nature of the lithology. The LIF locations are also off-set from the cross-section lines. The final cross sections developed for the Site are shown on Figures 3.1 through 3.6.

3.2 UPDATED CRITERIA

All investigation data has been screened against the current Part 201 criteria updated on September 28, 2012. Included in the September 28, 2012 criteria update was a revised spreadsheet for the calculation of Part 201 Groundwater Surface Water Interface (GSI) for {G} footnoted hazardous substances. Table 3.1 provides a copy of this updated spreadsheet showing the recalculated values for this Site. The previous version of these calculations was presented in the CCR which also provides the basis for the pH and hardness values.

During the 2012 RCRA field investigations, a speciation analysis was completed to determine the trivalent and hexavalent chromium concentrations at the Site. Tables 3.2 and 3.3 provide the chromium speciation results for soil and groundwater, respectively. As indicated by Table 3.2, chromium is predominantly present in the trivalent form in

soils at the Site and, therefore, chromium III screening criteria will be used for evaluating total chromium concentrations in soil. Chromium exceedances have not been observed in groundwater; therefore, chromium III screening criteria will be used for evaluating total chromium concentrations in groundwater.

A background concentration evaluation was completed to develop Site-specific concentrations for metals in soil and groundwater using statistical calculation procedures presented in the MDEQ guidance document entitled "Sampling Strategies and Statistics Training Materials" for Part 201 Cleanup Criteria. The calculations are provided in Appendix C. Tables 3.4 and 3.5 provide a summary of the Site-specific concentrations calculated for Willow Run Powertrain soil and groundwater levels respectively. Site specific background values obtained for several other sites in the immediate area are also included in this table as regional background levels.

3.3 SOIL AND GROUNDWATER

Analytical results for soil and groundwater were compared with Part 201 clean up criteria. Non-residential criteria were used across the Site except at locations along the perimeter where concentrations were compared to both residential and non-residential criteria. Perimeter locations are defined using a wide off-set from the property line to allow for inclusion of those locations that would most directly affect quality of off-Site groundwater flow should the inward gradient change.

3.3.1 DATA PRESENTATION

A list of Constituents of Concern (COC) was developed for both soil and groundwater during the CCR. COCs are defined as any constituent that exceeded residential criteria across the Site. A few constituents were added to the COC list from the CCR due to exceedances detected during the RFI investigations. As in the CCR, only COCs are reported in the databoxes. If soil or groundwater samples from a location were never analyzed for a COC, the COC is not shown in the databox for that location. Tables 3.6 and 3.7 list the COCs by matrix and the screening criteria used in this Report. Full lab reports for all constituents analyzed are included in Appendix D.

To facilitate review and interpretation of the databox figures, the Site was divided into nine sections (West 1, 2, 3 and 4, Central 1, 2 and 3, East 1 and 2) and the COCs were grouped as organics (volatile organic compounds [VOCs] and semi-volatile organic compounds [SVOCs]) and inorganics (metals and polychlorinated biphenyls [PCBs]). Databoxes include all the data from the CCR with the addition of the analytical results

from the more recent investigations with the following exception: Databoxes for any soil previously excavated from the Site have been removed as it was determined irrelevant to the analysis of existing Site conditions. Databox figures are presented in Appendix E. Tables of results are also provided (Table 3.8 for soil and Table 3.9 for groundwater).

To evaluate how the SSBL's would alter the exceedances identified, additional tables were prepared comparing metals results for soils and groundwater to the identified background levels. Groundwater results were also compared to the least restrictive regional background level for further evaluation. These tables are provided as Tables 3.10 and 3.11.

To further summarize current Site characterization, summary databox figures were prepared to present only constituents with criteria exceedances other than drinking water or groundwater surface water interface protection. These criteria are considered to be incomplete pathways for the Site due to the inward groundwater gradient, the absence of drinking water or surface water receptors on Site, and the distance to receptors off Site. These results are shown on Figures 3.7 for soil and 3.8 for groundwater.

Additional databox figures were prepared to show perimeter locations where drinking water or surface water protection criteria may present a greater concern should groundwater flow direction change. On these perimeter figures, constituents exceeding all generic Part 201 residential and non-residential criteria are shown. However, only concentrations also exceeding site specific background levels are flagged. To additionally filter the data, only perimeter locations and only the most recent event are included. These results are presented on Figures 3.9 for soil and 3.10 for groundwater.

3.3.2 DEEP WELL SAMPLING

Groundwater samples collected from the four deep wells in 2012 (during the RFI Work Plan) were highly turbid with elevated metals concentrations. Therefore, as described in the RFI Work Plan Addendum No. 1, the sampling methodology for deep well sampling in 2013 was slightly modified in an effort to reduce turbidity. Two samples were collected from each well. The first sample was collected per standard methodology. A second sample was collected 24 hours later without moving the pump or restabilizing the well and with the addition of a filtered sample for dissolved metals. Deep well sampling results from both 2012 and 2013 including the sample turbidities are presented in Table 3.12.

3.3.3 WATER QUALITY WITHIN EXTENT OF LNAPL

A separate evaluation of groundwater quality for locations within the extent of the LNAPL impacts was conducted using both recent and historic groundwater data. Groundwater quality shows little to no variation from within the LNAPL boundary to outside of it. Databox figures presenting this data compared to Part 201 Criteria along with the LNAPL characterization results from the LIF investigation presented in the LNAPL Report (provided in Appendix A) are included in Appendix F.

3.4 SOIL GAS

As proposed in the work plans, soil gas samples were collected at 17 locations and analyzed for VOCs. Analytical results were compared to the non-residential vapor intrusion shallow soil gas (sub slab) screening levels from the MDEQ Guidance Document. Results are shown on Table 3.13 and Figure 3.11.

3.5 DATA VALIDATION

Soil, groundwater, and soil gas data collected during the RFI field investigation was reviewed by CRA's chemistry department and validated according to the project Quality Assurance Project Plan (QAPP). The data validation memos are included in addition to the full analytical reports provided in Appendix D.

4.0 SUMMARY

The presence of soil and groundwater impacts and LNAPL warrants additional investigations, institutional control and/or interim/remedial measures to be completed. The next 1 to 2 years at the Site will see many changes which include demolition of the plant building and potentially redevelopment of the Site.

During this time it is anticipated that the items described below will be continued and/or completed.

- Completion of additional soil, groundwater and LNAPL investigations including:
  - Delineation of impacts near the south east property boundary
  - Completion of tasks remaining from RFI Work Plan (wells and borings surrounding the WWTP) upon finalization of property transaction with the Wayne County Airport Authority
  - Completion of remaining LIF work on airport property following finalization of an access agreement
- Monitoring to detect changes in Site conditions due to demolition including groundwater levels
- Follow changes in legislation and guidance related to vapor intrusion and their application to Site redevelopment
- Evaluation of future remediation strategies which may include land use restrictions, groundwater use restrictions, clean cover/caps, and groundwater recovery/treatment system

5.0 REFERENCES

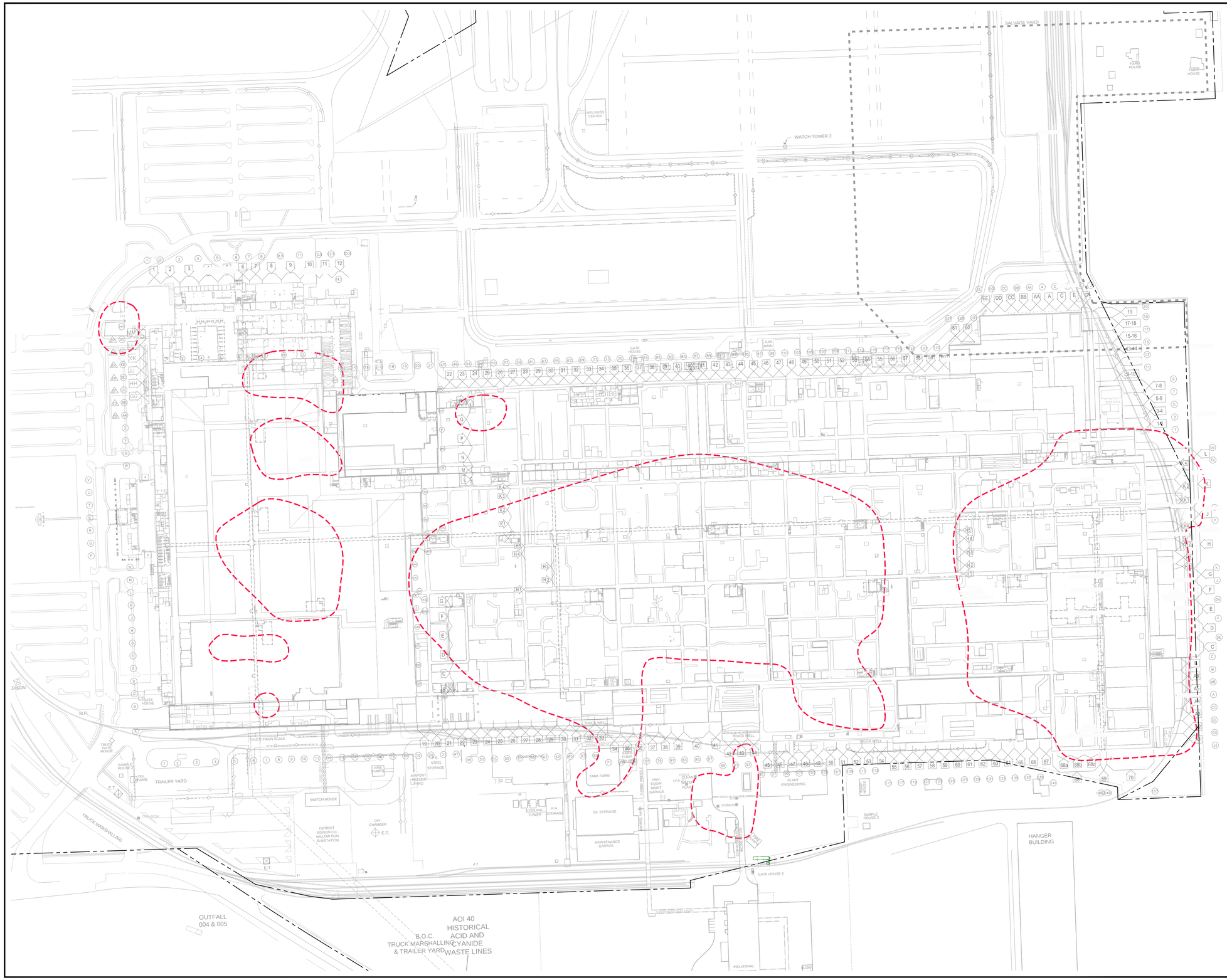
CRA. July 2011. Current Conditions Report, Former General Motors Powertrain Willow Run, Ypsilanti, Michigan.

CRA. February 2012. Resource Conservation and Recovery Act Facility Investigation Work Plan, Former Willow Run Powertrain Plant, Ypsilanti, Michigan.

CRA. March 2013. Resource Conservation and Recovery Act Facility Investigation Work Plan Addendum No. 1, Former Willow Run Powertrain Plant, Ypsilanti, Michigan.

CRA. July 2012. Draft LNAPL Delineation, Mobility, and Recoverability Study Report, Former Willow Run Powertrain, Ypsilanti, Michigan.

FIGURES



NO	Revision	Date	Initial

LEGEND

- PROPERTY BOUNDARY
- TRENCHES AND FLUMES (INCLUDES COOLANT TRENCHES (AOI 28))
- HISTORICAL ACID AND CYANIDE WASTE LINES (AOI 40)
- FENCE LINE
- RAILROAD
- APPROXIMATE EXTENT OF LNAPL BASED ON LIF AND IN WELL MEASUREMENTS
- PROPERTY SWAP AREA

N

0 50 150ft

SCALE VERIFICATION

THIS BAR MEASURES 1" ON ORIGINAL. ADJUST SCALE ACCORDINGLY.

Approved

DRAWING STATUS

Status	Date	Initial

EXTENT OF LNAPL IMPACTS 2013 RFI REPORT

YPSILANTI, MICHIGAN

WILLOW RUN POWERTRAIN

CONESTOGA-ROVERS & ASSOCIATES

Source Reference:

Project Manager:	Reviewed By:	Date:	
B.LANDALE	L. JERDON	JULY 2013	
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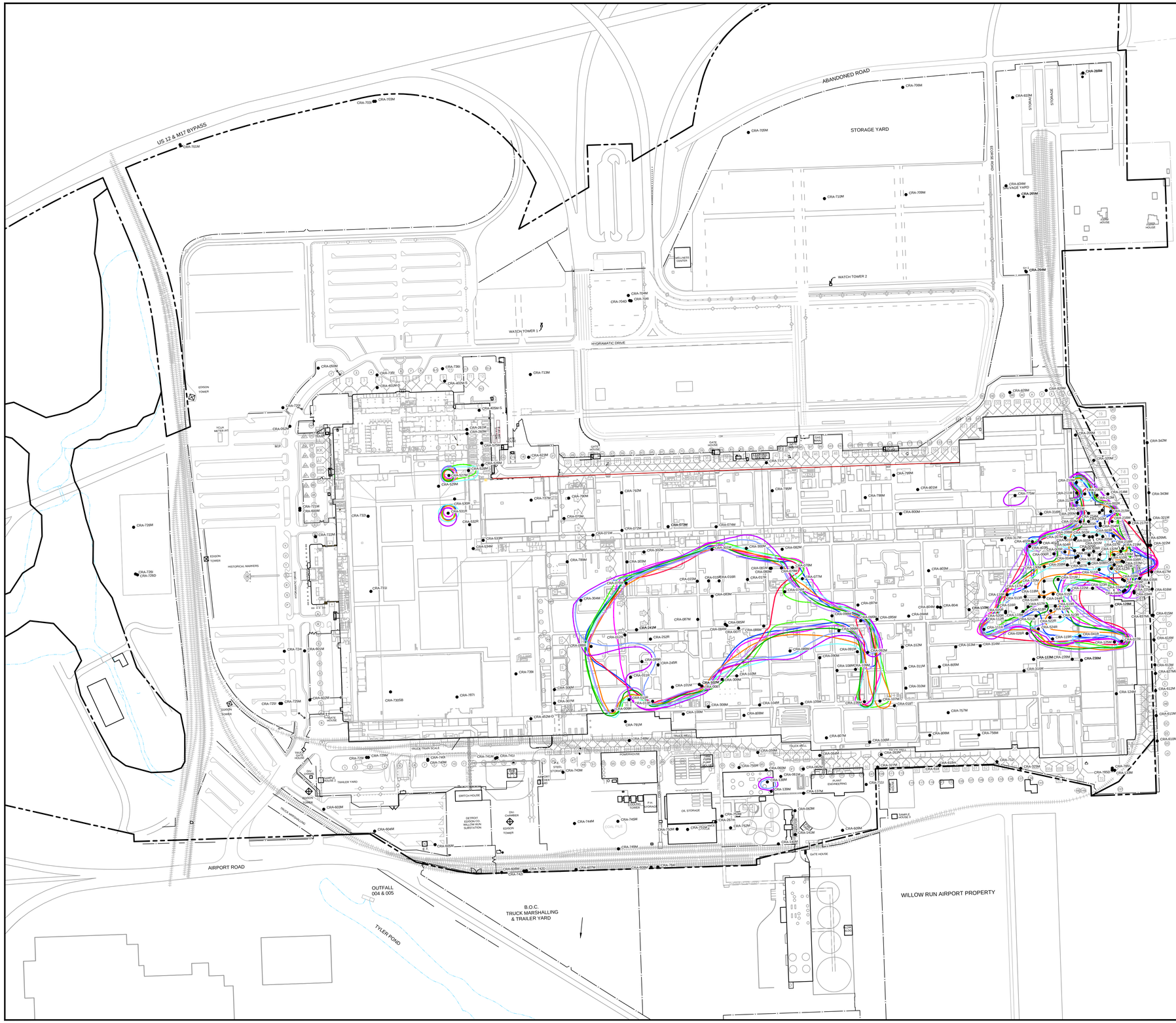
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ABANDONED ROAD
STORAGE YARD
HYDRAMATIC DRIVE
WATCH TOWER 1
WATCH TOWER 2
WELLNESS CENTER
EDISON TOWER
HISTORICAL MARKERS
HYDRAMATIC DRIVE
GUARD HOUSE
GATE HOUSE
SWITCH HOUSE
TRUCK SCALE HOUSE
TRUCK TRAIN SCALE
POWERHOUSE
PLANT ENGINEERING
OIL STORAGE
DIV. CHAMBER
DETROIT EDISON CO. WILLOW RUN SUBSTATION
TRUCK MARSHALLING
TRUCK & TRAILER YARD
AIRPORT ROAD
OUTFALL 004 & 005
TYLER POND
B.O.C. TRUCK MARSHALLING & TRAILER YARD
WILLOW RUN AIRPORT PROPERTY
WILLOW RUN AIRPORT PROPERTY
STORAGE
STORAGE
GOOSE ROAD
ZONE HOUSE
ZONE HOUSE
YCUA METER PIT
M.P.
CRA-701M
CRA-702M
CRA-703M
CRA-704M
CRA-704D
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US 12 & M17 BYPASS
ABANDONED ROAD
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STORAGE
ECORSE ROAD
SALVAGE YARD
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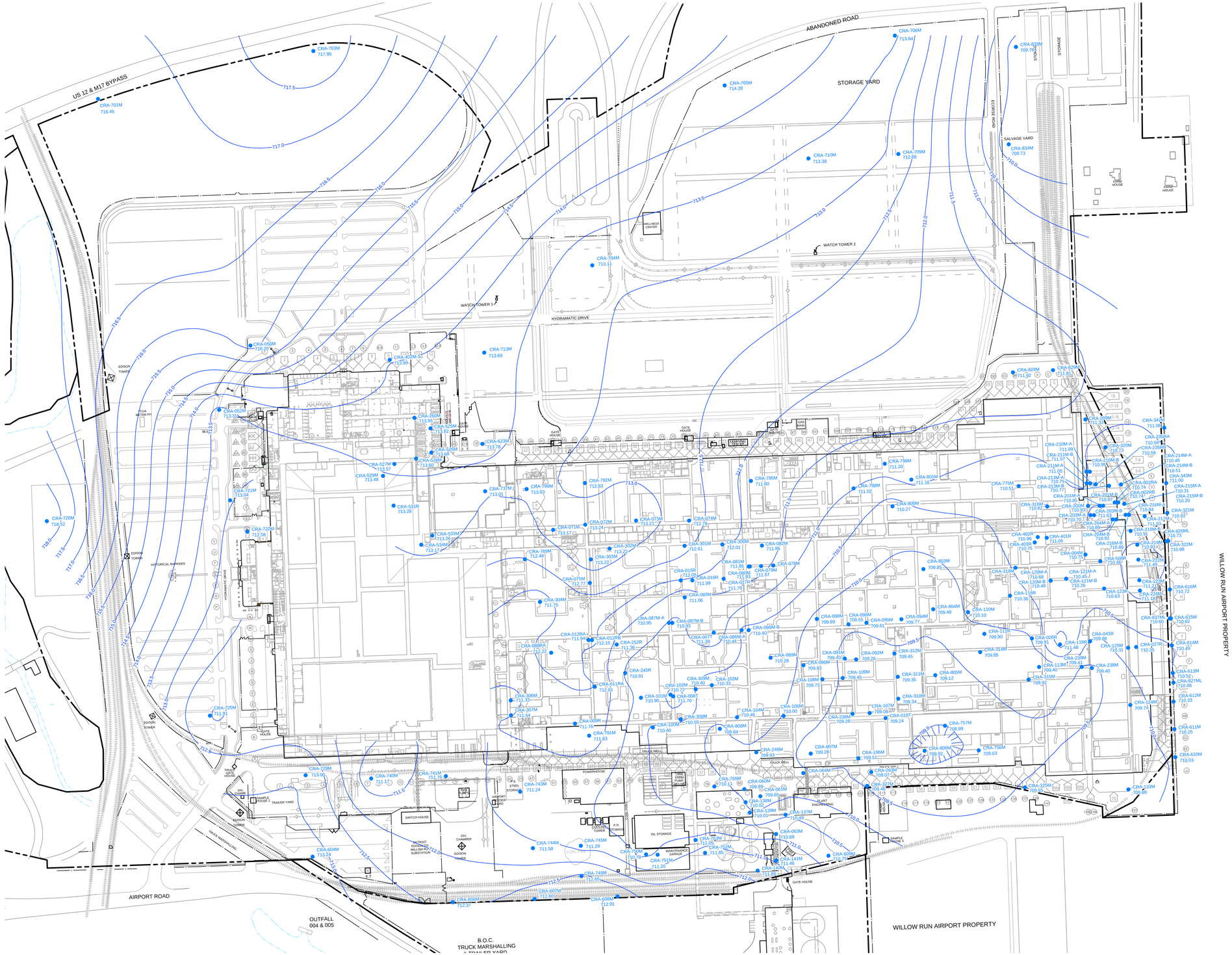
EDISON TOWER
VCUA METER PIT
M.E.P.
HISTORICAL MARKERS
RAILROAD CROSSING
EDISON TOWER
EDISON TOWER
EDISON TOWER
TRUCK WASH SCALE
DIV. HOUSE
GRADE 2
GRADE 1
TRAIL
SWITCH HOUSE
DETROIT EDISON CO. WILLOW RUN SUBSTATION
DPV RUNNER
EDISON TOWER
STEEL STORAGE
AIRPORT GATE
POWERHOUSE
TRANSFORMER
FUEL PUMP HOUSE
FUEL ENGINEHOUSE
TRUCK WELL
TRUCK WELL
OIL STORAGE
MAINTENANCE GARAGE
COAL PILE
SAMPLE HOUSE
GATE HOUSE
GATE HOUSE
GAT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SALVAGE YARD
ECORSE ROAD
STORAGE
STORAGE
ADMIN HOUSE
GUARD HOUSE
EDISON TOWER
HISTORICAL MARKERS
GATE HOUSE
GATE HOUSE
GATE HOUSE

Nº	Revision	Date	Initial

0 100 200ft

LEGEND

- CRA-804I — EXISTING MONITORING WELL LOCATIONS
- PROPERTY BOUNDARY
- SURFACE WATER
- RAILROAD
- 710 — GROUNDWATER CONTOUR
- 709.48 — GROUNDWATER ELEVATION (APRIL 2012)
- 702SB — INTERMEDIATE ZONE NOT FOUND

SCALE VERIFICATION

THIS BAR MEASURES 1" ON ORIGINAL. ADJUST SCALE ACCORDINGLY.

Approved

DRAWING STATUS

Status	Date	Initial

INTERMEDIATE GROUNDWATER CONTOURS - APRIL 2012

2013 RFI REPORT

YPSILANTI, MICHIGAN

WILLOW RUN POWERTRAIN

CONESTOGA-ROVERS & ASSOCIATES

Source Reference:

Project Manager:	Reviewed By:	Date:	
B. L.	L.J	JUNE 2013	
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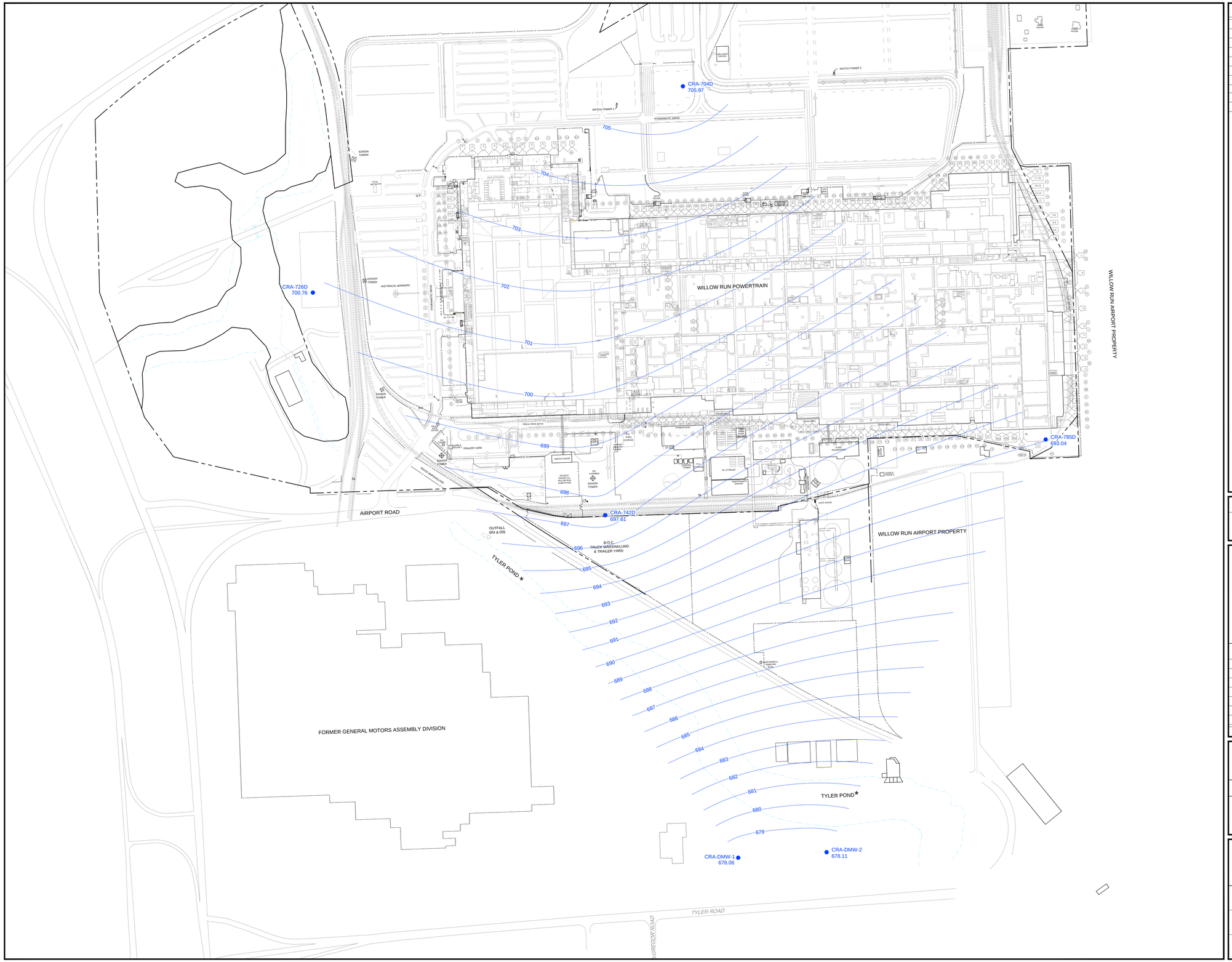


No	Revision	Date	Initial

0 125 250ft

LEGEND

- CRA-785D ● EXISTING MONITORING WELL LOCATIONS
- PROPERTY BOUNDARY (NOT FIELD VERIFIED)
- SURFACE WATER
- RAILROAD
- 705 GROUNDWATER CONTOUR
- 693.04 GROUNDWATER ELEVATION (APRIL 2012)
- * DEPTH OF TYLER POND: 678 AMSL

NOTE:
SATURATED ZONE FOR DEEP WELL RANGES FROM 632.6 TO 651.7 AMSL

SCALE VERIFICATION

THIS BAR MEASURES 1" ON ORIGINAL. ADJUST SCALE ACCORDINGLY.

Approved

DRAWING STATUS

Status	Date	Initial

DEEP GROUNDWATER CONTOURS - APRIL 2012

2013 RFI REPORT

YPSILANTI, MICHIGAN

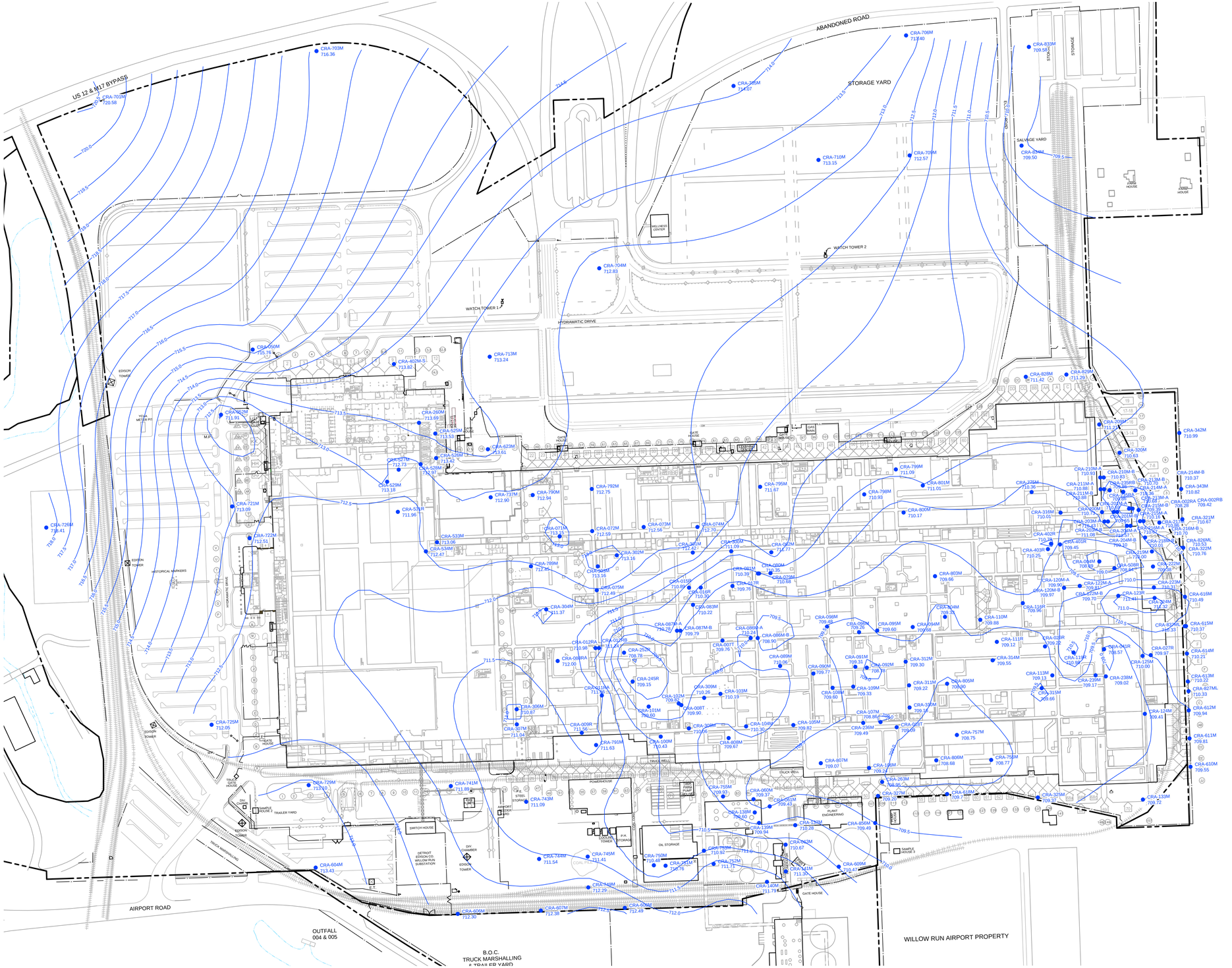
WILLOWRUN POWERTRAIN

CONESTOGA-ROVERS & ASSOCIATES

Source Reference:

Project Manager:	Reviewed By:	Date:	
B. L.	L. J.	JUNE 2013	
Scale: 1:250	Project No: 017358-T01	Report No: 023	Drawing No: 2.6

017358-T01(023)GN-DE006 JUL 29/2013


US 12 & M17 BYPASS
ABANDONED ROAD
STORAGE YARD
SALVAGE YARD
STORAGE
STORAGE
WELLNESS CENTER
WATCH TOWER 1
WATCH TOWER 2
HYDRAMATIC DRIVE
HISTORICAL MARKERS
EDISON TOWER
GATE HOUSE
TRUCK WELL
POWERHOUSE
PLANT ENGINEERING
SHOP
OIL STORAGE
FIRE PUMP HOUSE
DITCH HOUSE
DETROIT EDISON CO. WILLOW RUN SUBSTATION
SAMPLE HOUSE
TRAILER YARD
TRUCK MARSHALLING
AIRPORT ROAD
OUTFALL 004 & 005
B.O.C. TRUCK MARSHALLING & TRAILER YARD
WILLOW RUN AIRPORT PROPERTY
WILLOW RUN AIRPORT PROPERTY
CRA-703M 716.36
CRA-701M 720.58
CRA-706M 713.40
CRA-705M 714.07
CRA-833M 709.58
CRA-834M 709.50
CRA-710M 713.15
CRA-709M 712.57
CRA-704M 712.83
CRA-713M 713.24
CRA-090M 715.76
CRA-402M-S 713.82
CRA-828M 711.42
CRA-829M 711.29
CRA-342M 710.99
CRA-320M 710.63
CRA-200M 711.21
CRA-902M 711.91
CRA-260M 713.69
CRA-525M 713.53
CRA-623M 713.61
CRA-526M 713.52
CRA-527M 712.73
CRA-528M 712.97
CRA-529M 713.18
CRA-721M 713.09
CRA-726M 716.41
CRA-722M 712.51
CRA-533R 711.96
CRA-534M 712.47
CRA-737M 712.90
CRA-790M 712.94
CRA-792M 712.75
CRA-795M 711.67
CRA-799M 711.09
CRA-801M 711.01
CRA-798M 710.93
CRA-800M 710.17
CRA-785M 710.36
CRA-210M-A 710.93
CRA-210M-B 710.83
CRA-211M-A 710.88
CRA-211M-B 710.68
CRA-214M-B 710.37
CRA-343M 710.82
CRA-213M-B 710.70
CRA-213M-A 710.68
CRA-215M-A 710.36
CRA-215M-B 710.18
CRA-002RA 709.28
CRA-002RB 709.42
CRA-316M 710.01
CRA-203M 710.75
CRA-202M 710.75
CRA-201M 709.65
CRA-217 710.08
CRA-216M-A 710.05
CRA-216M-B 710.70
CRA-321M 710.67
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CRA-403R 710.25
CRA-401R 709.45
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CRA-204M 711.32
CRA-616M 710.49
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CRA-041R 708.57
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CRA-077M 711.77
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CRA-306M 710.87
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CRA-309M 710.26
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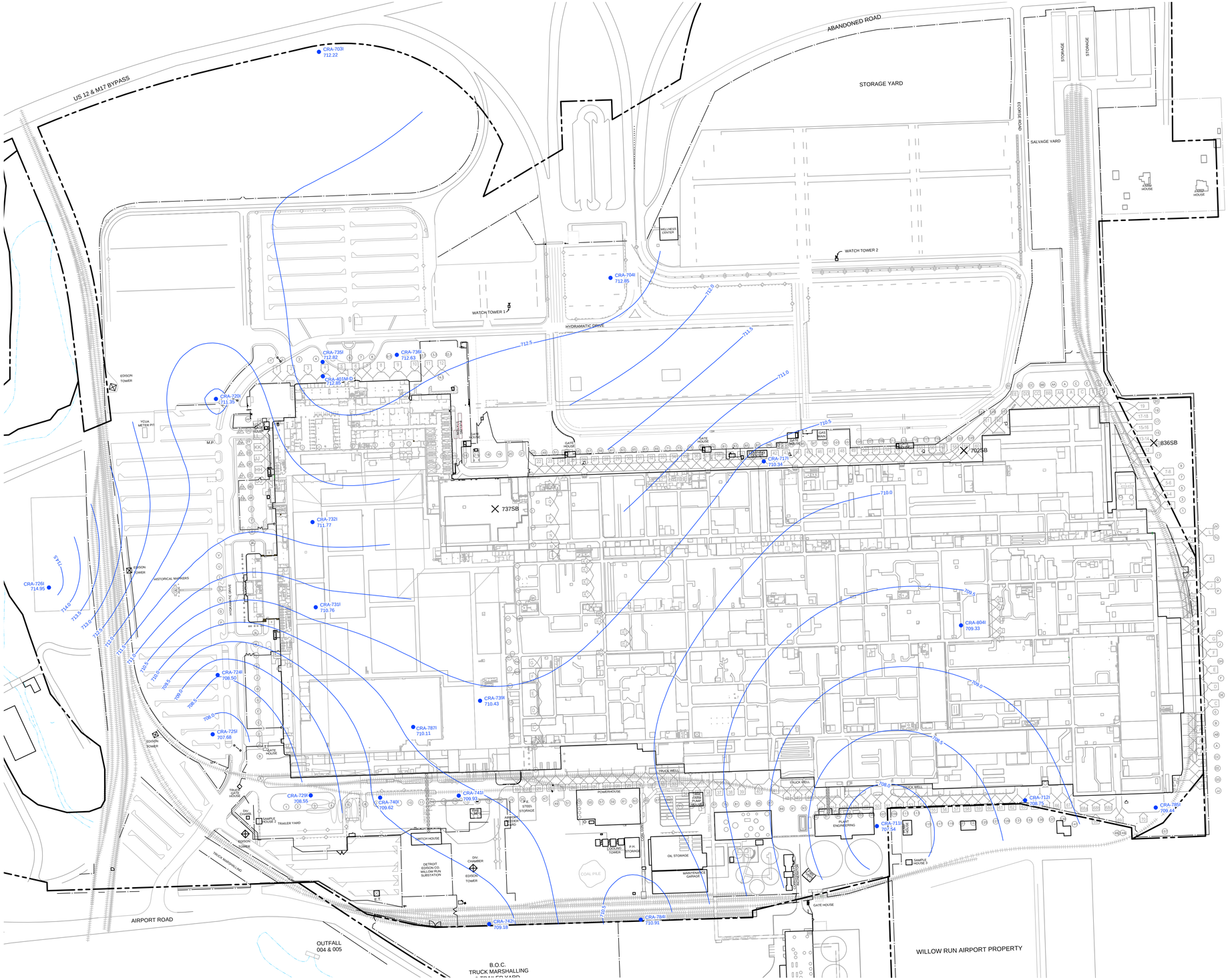
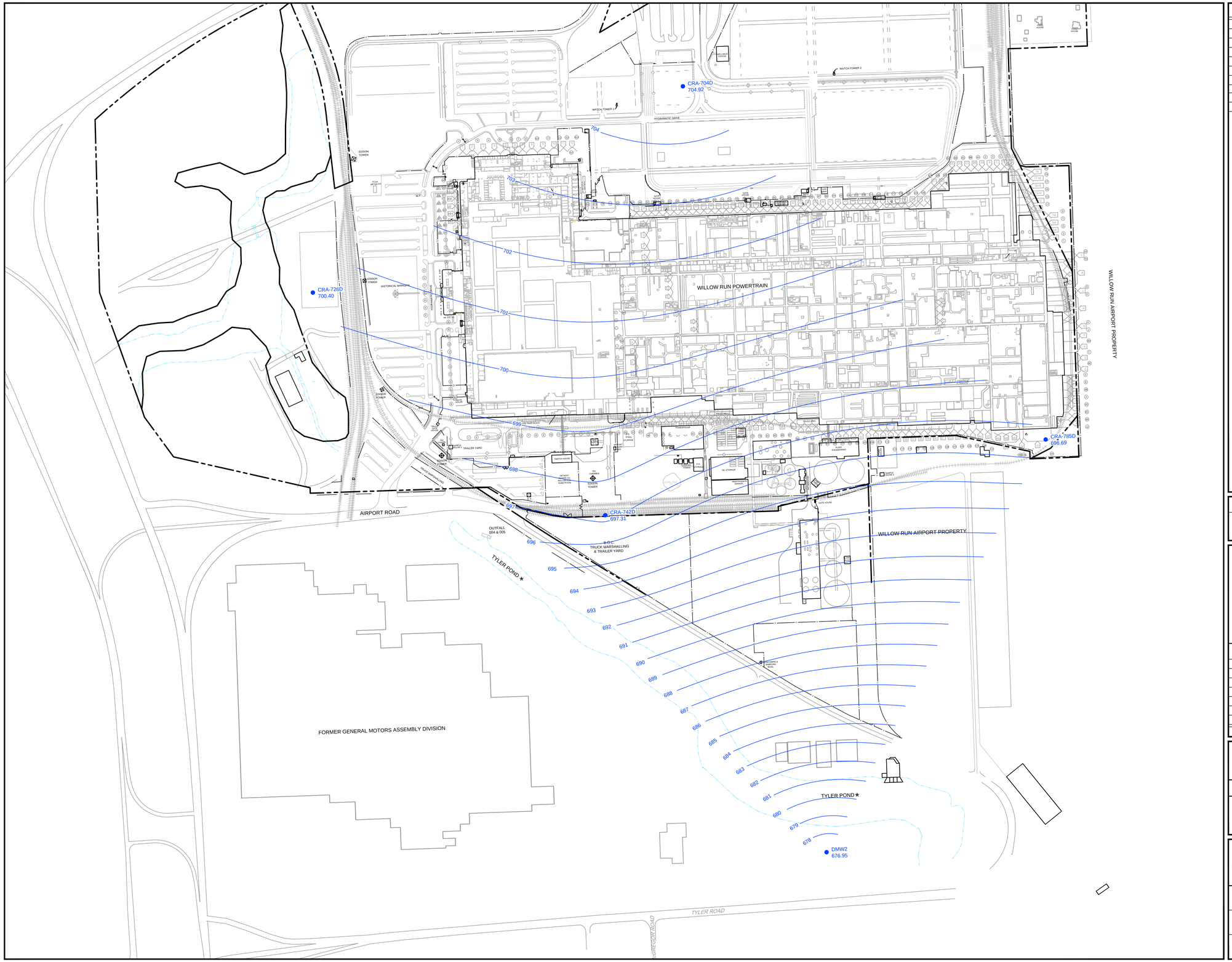
CRA-101M 709.60


US 12 & M17 BYPASS
ABANDONED ROAD
STORAGE YARD
STORAGE
STORAGE
SALVAGE YARD
LOOMISE ROAD
HYDRAMATIC DRIVE
WATCH TOWER 1
WATCH TOWER 2
WELLNESS CENTER
ADMIN HOUSE
PERS. HOUSE
EDISON TOWER
YCUA METER PIT
M.P.
GATE HOUSE
GATE HOUSE
GATE HOUSE



Nº	Revision	Date	Initial

0 125 250ft

LEGEND

- DMW2 — EXISTING MONITORING WELL LOCATIONS
- PROPERTY BOUNDARY (NOT FIELD VERIFIED)
- SURFACE WATER
- RAILROAD
- 705 — GROUNDWATER CONTOUR
- 676.95 — GROUNDWATER ELEVATION (APRIL 2013)
- ✶ — DEPTH OF TYLER POND: 678 AMSL

NOTE:
SATURATED ZONE FOR DEEP WELL RANGES FROM 632.6 TO 651.7 AMSL

SCALE VERIFICATION

THIS BAR MEASURES 1" ON ORIGINAL. ADJUST SCALE ACCORDINGLY.

Approved

DRAWING STATUS

Status	Date	Initial

DEEP GROUNDWATER CONTOURS - APRIL 2013
2013 RFI REPORT

YPSILANTI, MICHIGAN

WILLOWRUN POWERTRAIN

CONESTOGA-ROVERS & ASSOCIATES

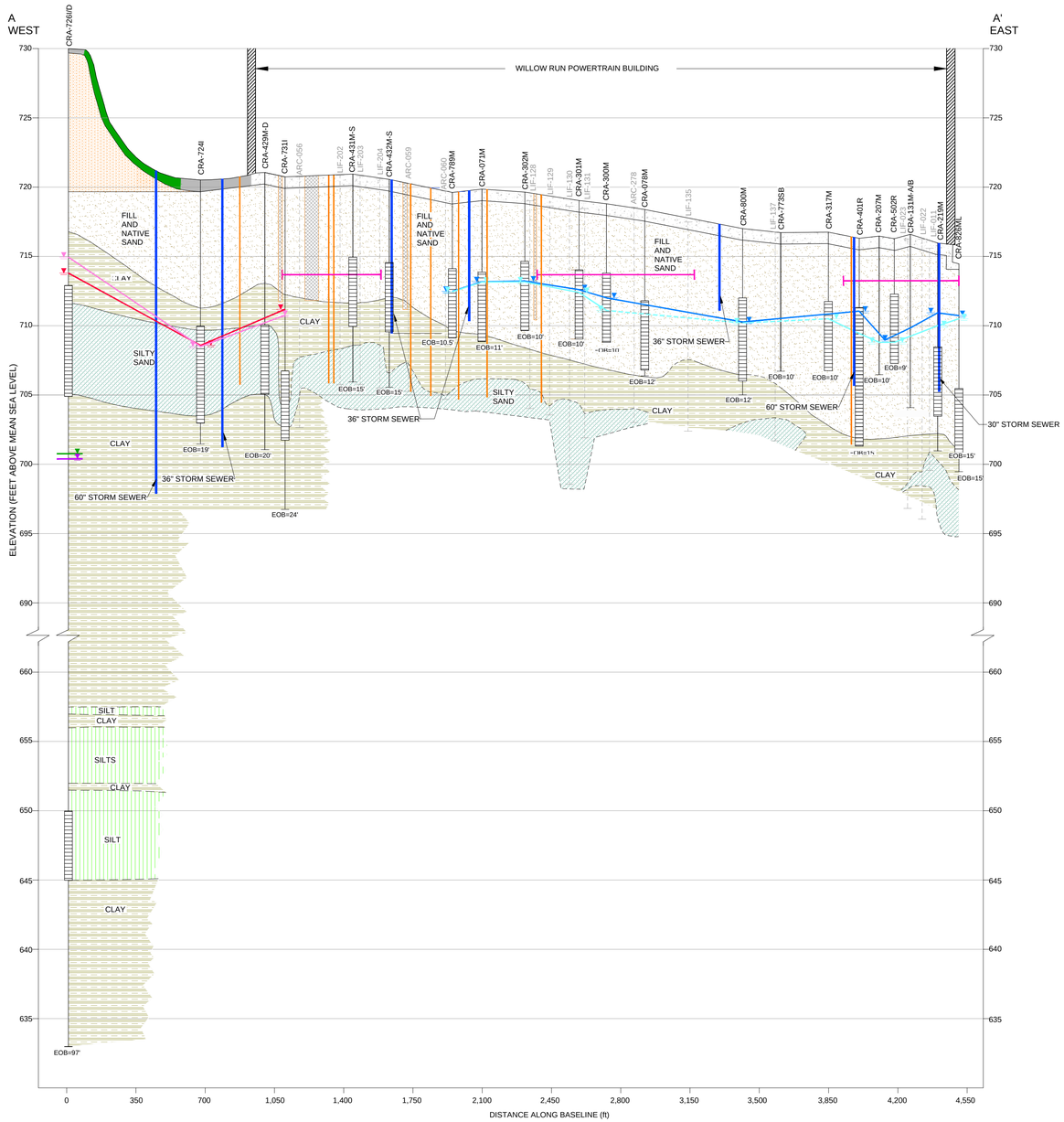
Source Reference:

Project Manager:	Reviewed By:	Date:	
B. L.	L. J.	JUNE 2013	
Scale: 1:250	Project Nº: 017358-T01	Report Nº: 023	Drawing Nº: 2.9

017358-T01(023)GN-DE061 JUL 30/2013

US 12 & M17 BYPASS
ABANDONED ROAD
STORAGE YARD
SALVAGE YARD
STORAGE
STORAGE
ECORSE ROAD
WELLNESS CENTER
WATCH TOWER 2
WATCH TOWER 1
HYDRAMATIC DRIVE
EDISON TOWER
YCUA METER PIT
M.P.
WALK-IN ENTRANCE
TUNNEL EXHAUST FAN F2-C TRUSS SPACE
GATE HOUSE
GAS
OIL
ENTRANCE HATCH
TRUCK WELL
PLANT ENGINEERING
MAINTENANCE GARAGE
OIL STORAGE
COAL PILE
SAND & SALT HOUSE 3
ENTRANCE HATCH
GATE HOUSE
TRUCK WELL
TRUCK WELL
TRUCK WELL

KEY MAP



N⁰	Revision	Date	Initial

LEGEND

- ESTIMATED EXTENT OF LNAPL BASED ON LIF & IN WELL MEASUREMENTS
- SHALLOW GROUNDWATER ELEVATION (APRIL 2012)
- SHALLOW GROUNDWATER ELEVATION (APRIL 2013)
- INTERMEDIATE GROUNDWATER ELEVATION (APRIL 2012)
- INTERMEDIATE GROUNDWATER ELEVATION (APRIL 2013)
- DEEP GROUNDWATER ELEVATION (APRIL 2012)
- DEEP GROUNDWATER ELEVATION (APRIL 2013)
- STEAM AND POWER ACCESS TUNNEL
- STORM SEWER UTILITY CORRIDOR FILL

- TOPSOIL
- CONCRETE
- ASPHALT
- FILL
- FILL AND NATIVE SAND
- SILTY SAND
- CLAY
- SILT

LASER INDUCED FLOURESCENCE BORING ★ LIF-130

CRA-502R
WELL ID
GROUND SURFACE
WELL
SCREEN
EOB= END OF BORING

SCALE:
HORIZONTAL 1" = 350'
VERTICAL 1" = 5'

★ STRATIGRAPHY ELEVATIONS INTERPRETED FROM CONDUCTIVITY DATA
LIF LOCATIONS ADJACENT TO CROSS-SECTION LINE.

SCALE VERIFICATION

THIS BAR MEASURES 1" ON ORIGINAL. ADJUST SCALE ACCORDINGLY.

Approved

DRAWING STATUS

Status	Date	Initial

CROSS-SECTION A-A'
2013 RFI REPORT

YPSILANTI, MICHIGAN

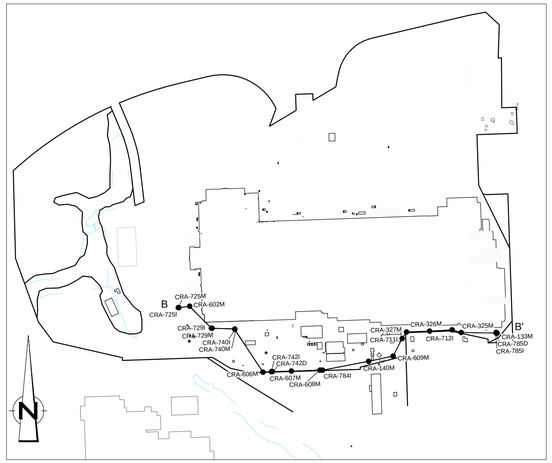
WILLOW RUN POWERTRAIN

CONESTOGA-ROVERS & ASSOCIATES

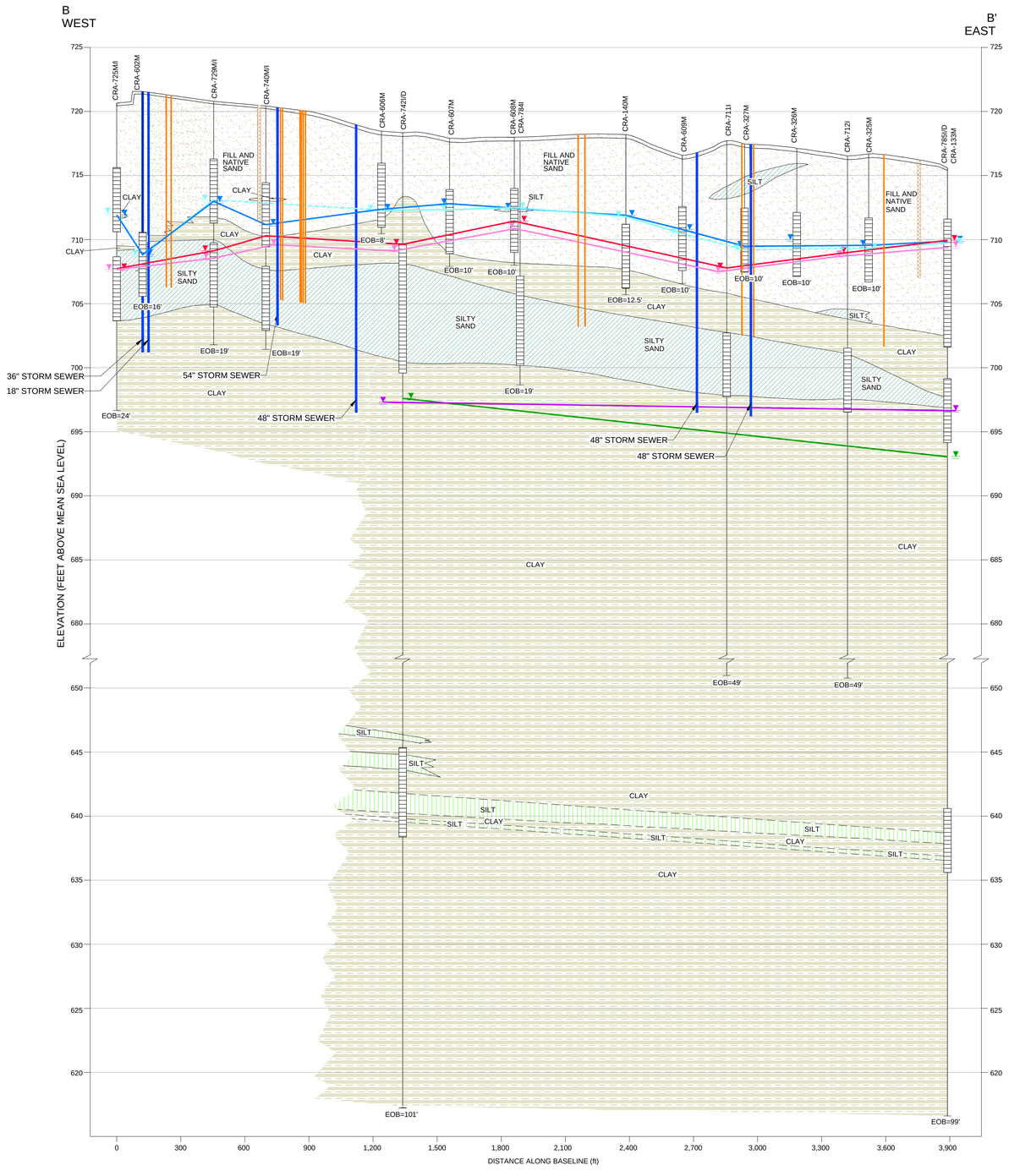
Source Reference:

Project Manager:	Reviewed By:	Date:	
B. L.	L. J.	JUNE 2013	
Scale: 1:350	Project N⁰: 017358-T01	Report N⁰: 023	Drawing N⁰: 3.2

017358-T01(023)GN-DE002 JUN 28/2013



KEY MAP



Nº	Revision	Date	Initial

LEGEND

- SHALLOW GROUNDWATER ELEVATION (APRIL 2012)
- SHALLOW GROUNDWATER ELEVATION (APRIL 2013)
- INTERMEDIATE GROUNDWATER ELEVATION (APRIL 2012)
- INTERMEDIATE GROUNDWATER ELEVATION (APRIL 2013)
- DEEP GROUNDWATER ELEVATION (APRIL 2012)
- DEEP GROUNDWATER ELEVATION (APRIL 2013)
- STEAM AND POWER ACCESS TUNNEL
- STORM SEWER UTILITY CORRIDOR FILL
- CONCRETE
- UTILITY CORRIDOR FILL
- FILL AND NATIVE SAND
- SILTY SAND
- CLAY
- SILT

CRA-140M — WELL ID
GROUND SURFACE
WELL
SCREEN
EOB= END OF BORING

SCALE:
HORIZONTAL 1" = 300'
VERTICAL 1" = 5'

SCALE VERIFICATION

THIS BAR MEASURES 1" ON ORIGINAL. ADJUST SCALE ACCORDINGLY.

Approved

DRAWING STATUS

Status	Date	Initial

CROSS-SECTION B-B'
2013 RFI REPORT

YPSILANTI, MICHIGAN

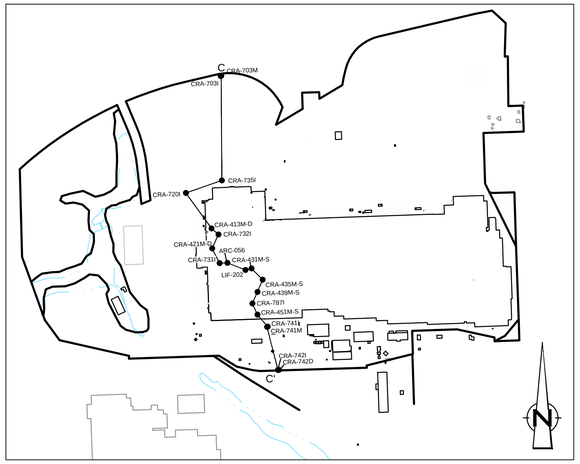
WILLOW RUN POWERTRAIN

CONESTOGA-ROVERS & ASSOCIATES

Source Reference:

Project Manager:	Reviewed By:	Date:	
B. L.	L. J.	JUNE 2013	
Scale: 1:300	Project Nº: 017358-T01	Report Nº: 023	Drawing Nº: 3.3

017358-T01(023)GN-DE002 JUN 28/2013



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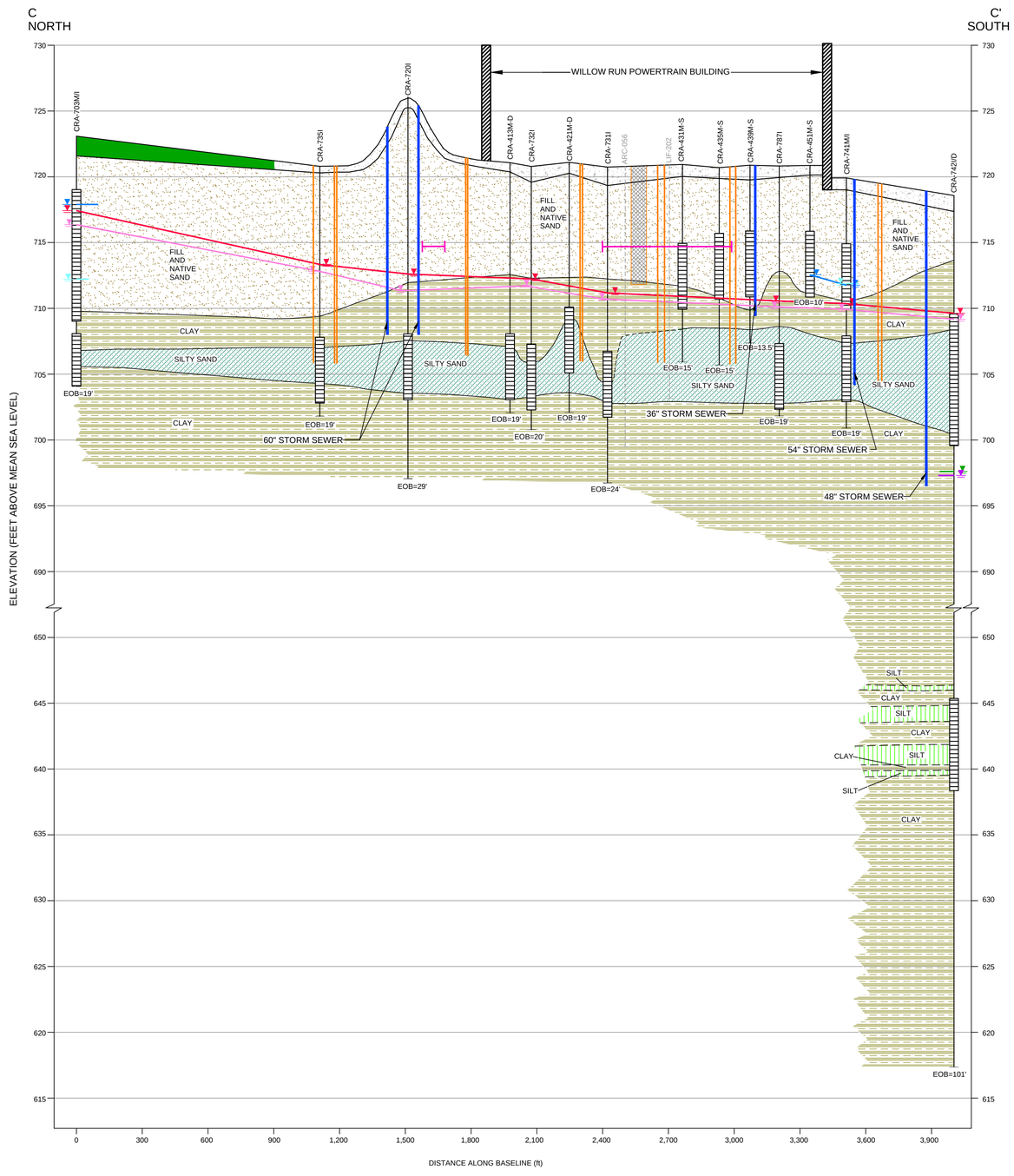
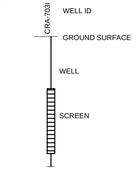


No	Revision	Date	Initial

LEGEND

- ESTIMATED EXTENT OF LNAPL BASED ON LIF & IN WELL MEASUREMENTS
- SHALLOW GROUNDWATER ELEVATION (APRIL 2012)
- SHALLOW GROUNDWATER ELEVATION (APRIL 2013)
- INTERMEDIATE GROUNDWATER ELEVATION (APRIL 2012)
- INTERMEDIATE GROUNDWATER ELEVATION (APRIL 2013)
- DEEP GROUNDWATER ELEVATION (APRIL 2012)
- DEEP GROUNDWATER ELEVATION (APRIL 2013)
- STEAM AND POWER ACCESS TUNNEL
- STORM SEWER UTILITY CORRIDOR FILL
- TOPSOIL
- CONCRETE
- FILL AND NATIVE SAND
- SILTY SAND
- CLAY
- SILT

LASER INDUCED FLOURESCENCE BORING ★



SCALE:
HORIZONTAL 1" = 300'
VERTICAL 1" = 5'

★ STRATIGRAPHY ELEVATIONS INTERPRETED FROM CONDUCTIVITY DATA
LIF LOCATIONS ADJACENT TO CROSS-SECTION LINE

SCALE VERIFICATION

THIS BAR MEASURES 1" ON ORIGINAL. ADJUST SCALE ACCORDINGLY.

Approved

DRAWING STATUS

Status	Date	Initial

CROSS-SECTION C-C'
2013 RFI REPORT

YPSILANTI, MICHIGAN

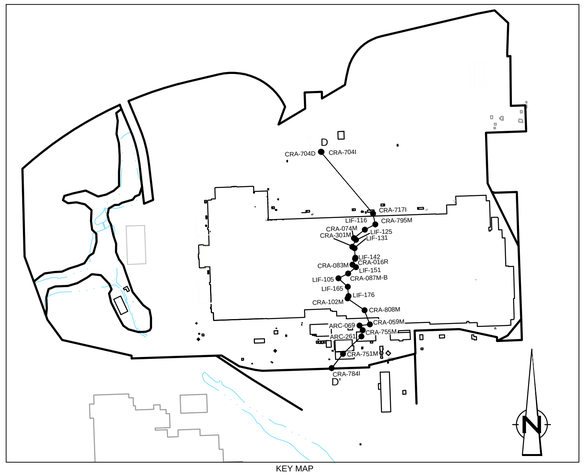
WILLOW RUN POWERTRAIN

CONESTOGA-ROVERS & ASSOCIATES

Source Reference:

Project Manager:	Reviewed By:	Date:	
B L.	L. J.	JUNE 2013	
Scale: 1:300.0002	Project No.: 017358-T01	Report No.: 023	Drawing No.: 3.4

017358-T01(023)GN-DE002 JUN 28/2013



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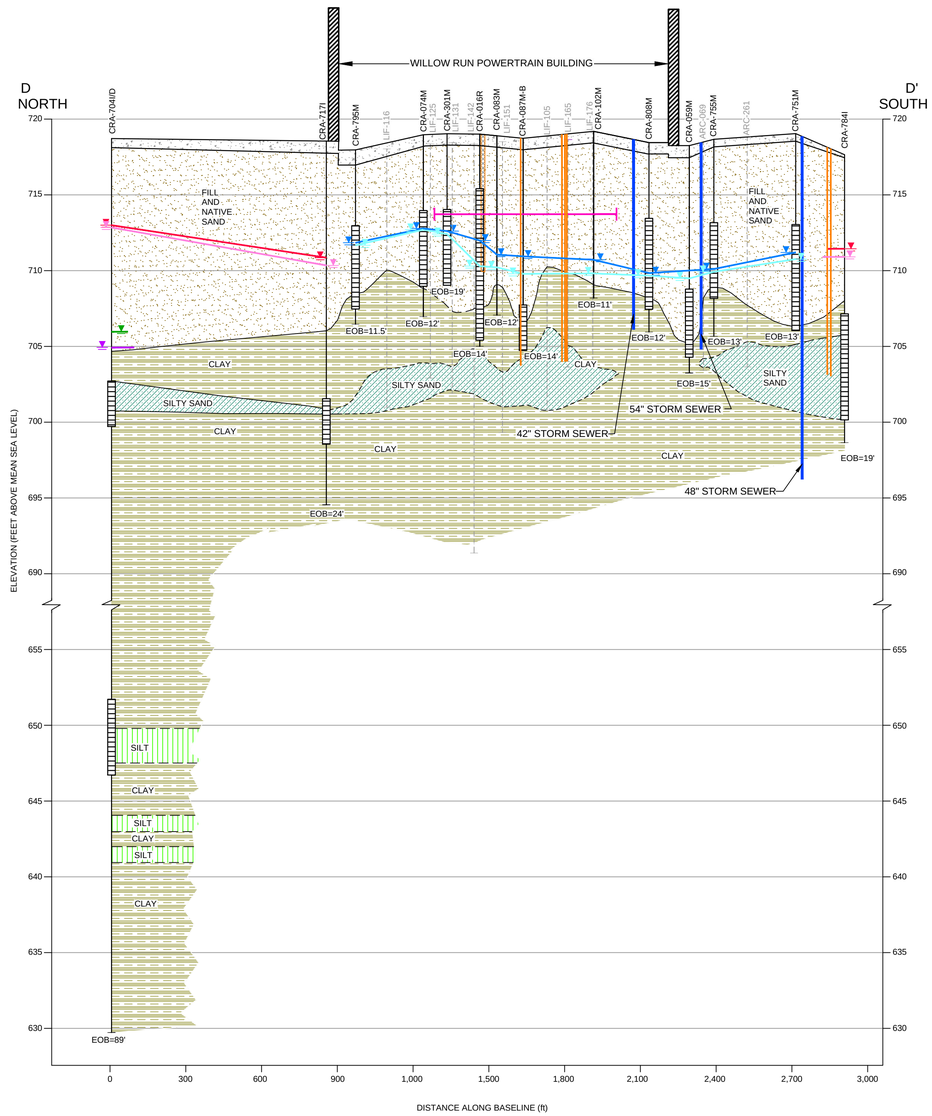


N⍰	Revision	Date	Initial

LEGEND

- ESTIMATED EXTENT OF LNAPL BASED ON LIF & IN WELL MEASUREMENTS
- SHALLOW GROUNDWATER ELEVATION (APRIL 2012)
- SHALLOW GROUNDWATER ELEVATION (APRIL 2013)
- INTERMEDIATE GROUNDWATER ELEVATION (APRIL 2012)
- INTERMEDIATE GROUNDWATER ELEVATION (APRIL 2013)
- DEEP GROUNDWATER ELEVATION (APRIL 2012)
- DEEP GROUNDWATER ELEVATION (APRIL 2013)
- STEAM AND POWER ACCESS TUNNEL
- STORM SEWER UTILITY CORRIDOR FILL
- CONCRETE
- FILL AND NATIVE SAND
- SILTY SAND
- CLAY
- SILT

LASER INDUCED FLOURESCENCE BORING ★

LIF-125

CRA-704I
- WELL ID
- GROUND SURFACE
- WELL
- SCREEN

EOB= END OF BORING

SCALE:

HORIZONTAL 1" = 300'
VERTICAL 1" = 5'

★ STRATIGRAPHY ELEVATIONS INTERPRETED FROM CONDUCTIVITY DATA LIF LOCATIONS ADJACENT TO CROSS-SECTION LINE

SCALE VERIFICATION

THIS BAR MEASURES 1" ON ORIGINAL. ADJUST SCALE ACCORDINGLY.

Approved

DRAWING STATUS

Status	Date	Initial

CROSS-SECTION D-D'
2013 RFI REPORT

YPSILANTI, MICHIGAN

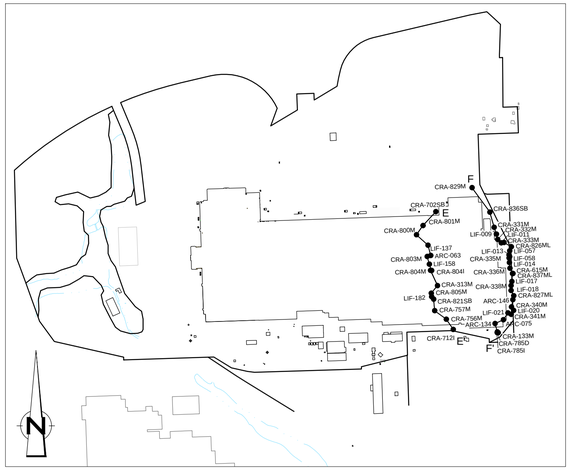
WILLOW RUN POWERTRAIN

CONESTOGA-ROVERS & ASSOCIATES

Source Reference:

Project Manager:	Reviewed By:	Date:	
B. L.	L. J.	JUNE 2013	
Scale: 1:300	Project N⍰: 017358-T01	Report N⍰: 023	Drawing N⍰: 3.5

017358-T01(023)GN-DE002 JUN 28/2013



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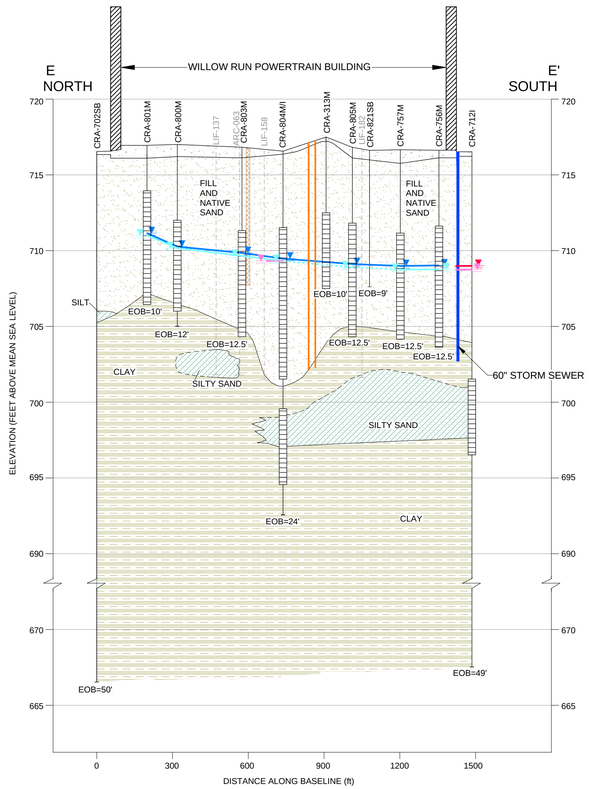
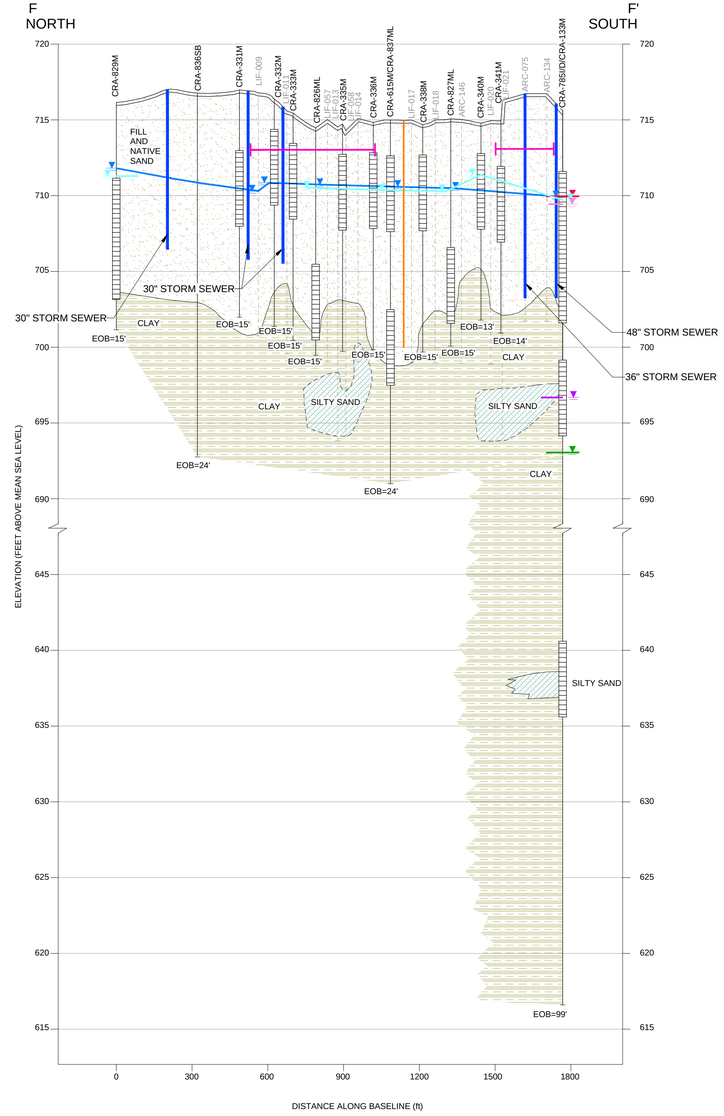




Nº	Revision	Date	Initial

LEGEND

- ESTIMATED EXTENT OF LNAPL BASED ON LIF & IN WELL MEASUREMENTS
- SHALLOW GROUNDWATER ELEVATION (APRIL 2012)
- SHALLOW GROUNDWATER ELEVATION (APRIL 2013)
- INTERMEDIATE GROUNDWATER ELEVATION (APRIL 2012)
- INTERMEDIATE GROUNDWATER ELEVATION (APRIL 2013)
- DEEP GROUNDWATER ELEVATION (APRIL 2012)
- DEEP GROUNDWATER ELEVATION (APRIL 2013)
- STEAM AND POWER ACCESS TUNNEL
- STORM SEWER UTILITY CORRIDOR FILL

- CONCRETE
- FILL AND NATIVE SAND
- SILTY SAND
- CLAY
- SILT

LASER INDUCED FLOURESCENCE BORING ★ — LIF-137

CRA-801M — WELL ID
GROUND SURFACE
WELL
SCREEN
EOB= END OF BORING

SCALE:
HORIZONTAL 1" = 300'
VERTICAL 1" = 5'

★ STRATIGRAPHY ELEVATIONS INTERPRETED FROM CONDUCTIVITY DATA
LIF LOCATIONS ADJACENT TO CROSS-SECTION LINE

SCALE VERIFICATION

THIS BAR MEASURES 1" ON ORIGINAL. ADJUST SCALE ACCORDINGLY.

Approved

DRAWING STATUS

Status	Date	Initial

CROSS-SECTIONS E-E' & F-F'
2013 RFI REPORT

YPSILANTI, MICHIGAN

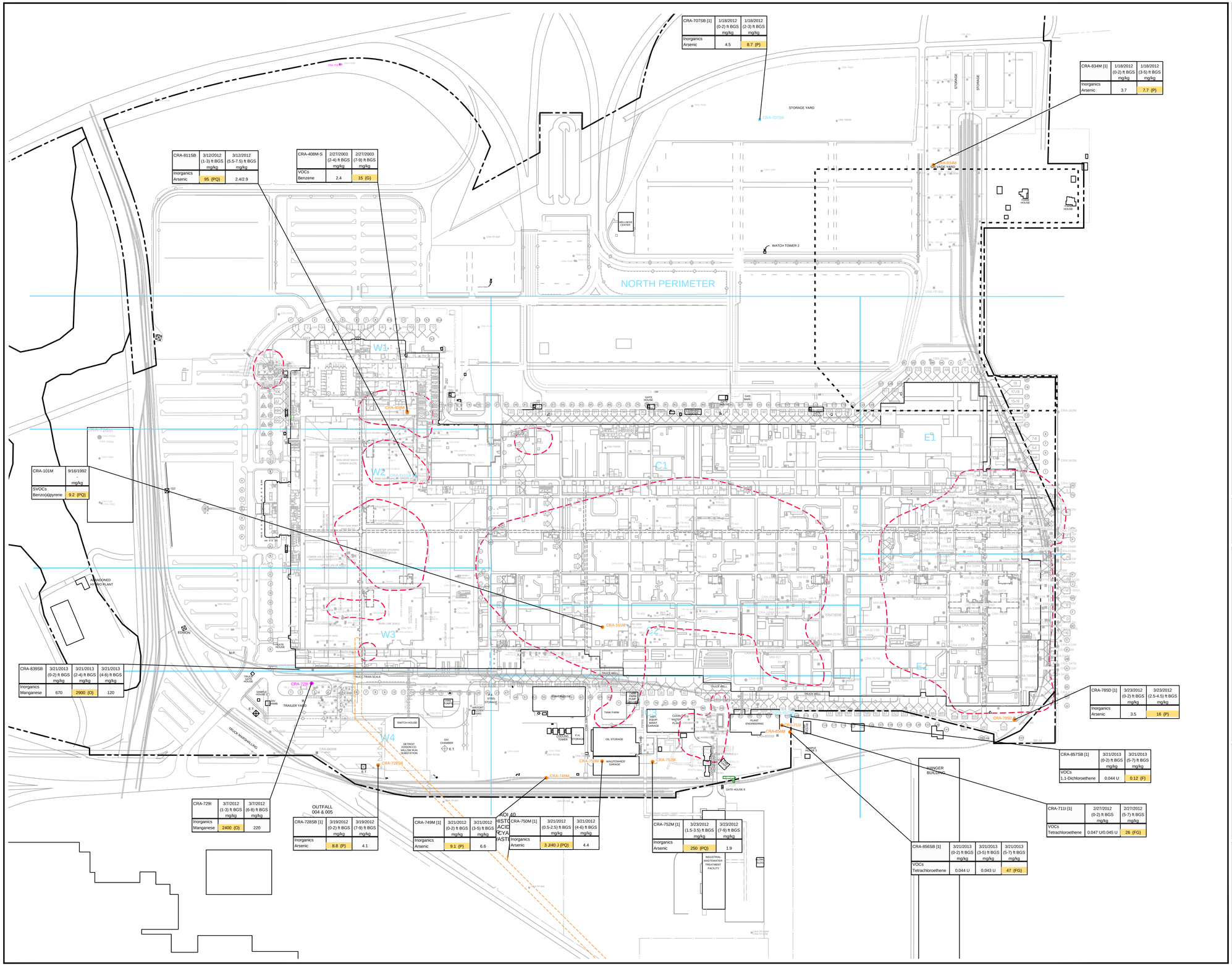
WILLOW RUN POWERTRAIN

CONESTOGA-ROVERS & ASSOCIATES

Source Reference:

Project Manager:	Reviewed By:	Date:	
B. L.	L. J.	JUNE 2013	
Scale: 1:300	Project Nº: 017358-T01	Report Nº: 023	Drawing Nº: 3.6

017358-T01(023)GN-DE002 JUN 28/2013



NΩ	Revision	Date	Initial

LEGEND

- PROPERTY BOUNDARY
- HISTORICAL ACID AND CYANIDE WASTE LINES (AOI 40)
- SITE SECTION DESIGNATION
- FENCE LINE
- RAILROAD
- APPROXIMATE EXTENT OF LNAPL BASED ON LIF AND IN WELL MEASUREMENTS
- PROPERTY SWAP AREA
- CRA-726M — EXISTING WELL SHALLOW
- CRA-726I — EXISTING WELL INTERMEDIATE
- CRA-726D — EXISTING WELL DEEP
- CRA-409M-S — ABANDONED WELL SHALLOW
- CRA-421M-D — ABANDONED WELL INTERMEDIATE
- CRA-TP-011 — TEST PIT
- CRA-707SB — SOIL BORING
- CRA-821GP — EXISTING GAS PROBE

0 50 150ft

LOCATION — CRA-707SB [1] | 11/6/1984 mg/kg | 9/21/1989 mg/kg — DATE / UNITS

PARAMETER — EXCEEDANCES

VOCs		
Benzene	4.99 (BC)	0.21 (BC)
Ethylbenzene	0.001 U	0.01 U
Tetrachloroethene	-	0.01 U
Toluene	0.001 U	0.01 U
Trichloroethene	-	0.01 U
Xylenes (total)	-	0.01 U

NOTES:

[1] LOCATION SCREENED AGAINST RESIDENTAL CRITERIA
U- CONSTITUENT NOT DETECTED ABOVE METHOD DETECTION LIMIT
J- ESTIMATED VALUE

NOTE: DATA PRESENTED IN THE DATABOXES IS ONLY FOR THE CONSTITUENTS OF CONCERN (COC) AS DEFINED IN THE REPORT TEXT. IF A COC WAS NEVER SAMPLED FOR AT A LOCATION, THAT COC IS NOT SHOWN IN THE DATABOX FOR THAT LOCATION.

SCALE VERIFICATION

THIS BAR MEASURES 1" ON ORIGINAL. ADJUST SCALE ACCORDINGLY.

Approved

Soil Screening Criteria
(C) - Groundwater Contact Protection Criteria
(P) - Residential Volatilization to Indoor Air Inhalation
(GI) - Non-Residential Volatilization to Indoor Air Inhalation
(HI) - Residential Infinite Source Volatile Soil Inhalation Criteria (VSIC)
(I) - Non-residential Infinite Source Volatile Soil Inhalation Criteria (VSIC)
(J) - Residential Finite VSIC for 5 M Source Thickness
(K) - Non-residential Finite VSIC for 5 M Source Thickness
(L) - Residential Finite VSIC for 2 M Source Thickness
(M) - Non-residential Finite VSIC for 2 M Source Thickness
(N) - Residential Particulate Soil Inhalation Criteria
(O) - Non-residential Particulate Soil Inhalation Criteria
(P) - Residential Direct Contact Criteria
(Q) - Non-residential Direct Contact Criteria
(R) - Soil Saturation Concentration Screening

DRAWING STATUS

Status	Date	Initial

SOIL SELECTED PATHWAY SUMMARY -SITEWIDE 2013 RFI REPORT

YPSILANTI, MICHIGAN

WILLOW RUN POWERTRAIN

CONESTOGA-ROVERS & ASSOCIATES

Source Reference:

Project Manager:	Reviewed By:	Date:	
B.LANDALE	L. JERDON	JULY 2013	
Scale: 1"=150'	Project Nº: 017358-T01	Report Nº: 023	Drawing Nº: 3.7

017358-T01(023)GN-DE049 JUL 31/2013

CRA-071M	9/11/1989 mg/L	2/24/2003 mg/L	1/19/2007 mg/L	3/25/2008 mg/L	4/16/2012 mg/L	4/9/2013 mg/L
SVOCs						
Benzo(a)anthracene	0.01 U	0.004 U	0.00047 J	0.023 (FG)	0.00041 J	0.00057 J
Benzo(a)pyrene	0.01 U	0.004 U	0.001 U	0.0088 (FG)	0.001 U	0.00028 J
Benzo(b)fluoranthene	0.01 U	0.004 U	0.001 U	0.018 (FG)	0.001 U	0.000098 J
Benzo(g,h,i)perylene	0.01 U	0.005 U	0.001 U	0.0046 J(FG)	0.001 U	0.00098 U
Benzo(k)fluoranthene	0.01 U	0.005 U	0.001 U	0.0082 (FG)	0.001 U	0.00098 U
Chrysene	0.01 U	0.005 U	0.00052 J	0.022 (FG)	0.00045 J	0.00054 J
Indeno(1,2,3-cd)pyrene	0.01 U	0.004 U	0.002 U	0.0045 J(FG)	0.002 U	0.002 U

CRA-101M	9/16/1992 mg/L
SVOCs	
Anthracene	11 (EFG)
Benzo(a)anthracene	22 (FG)
Benzo(a)pyrene	9.2 (FG)
Benzo(b)fluoranthene	73 (FG)
Benzo(k)fluoranthene	31 (FG)
Chrysene	53 (FG)
Fluoranthene	1400 (EFG)
Fluorene	6.3 (EFG)
Phenanthrene	32 (EFG)
Pyrene	700 (EFG)

CRA-092M	4/14/1993 mg/L
SVOCs	
Fluorene	2.4 (EFG)
Phenanthrene	8.5 (EFG)
Pyrene	7.7 (EFG)

CRA-343M [1]	8/25/2004 mg/L	1/23/2007 mg/L	3/17/2008 mg/L
SVOCs			
Benzo(g,h,i)perylene	0.00086 J(G)	0.001 U	0.001 U

CRA-729M	4/20/2012 mg/L	4/3/2013 mg/L
SVOCs		
Indeno(1,2,3-cd)pyrene	0.002 U	0.00015 J(G)

A1-B1	8/23/1994 mg/L
SVOCs	
Phenanthrene	2 (EFG)

CRA-105M	9/17/1992 mg/L	3/17/1993 mg/L	1/17/2007 mg/L	3/28/2008 mg/L	9/16/2010 mg/L
VOCs					
Vinyl chloride	1.8 (F)	1.8 (F)	0.024	0.031	0.0094

CRA-107M	4/14/1993 mg/L
SVOCs	
Anthracene	52 (EFG)
Chrysene	28 (FG)
Fluoranthene	116 (EFG)
Fluorene	24 (EFG)
Phenanthrene	100 (EFG)
Pyrene	380 (EFG)

CRA-806M	4/12/2012 mg/L	4/8/2013 mg/L
SVOCs		
Benzo(g,h,i)perylene	0.00028 J(G)	0.00095 U

CRA-225M [1]	1/18/1993 mg/L	3/19/1997 mg/L	5/5/2000 mg/L	8/1/2000 mg/L	8/21/2000 mg/L	1/11/2001 mg/L	9/29/2001 mg/L	12/13/2001 mg/L
SVOCs								
Benzo(g,h,i)perylene	0.005 U	0.005 U	0.005 U	0.00183 (FG)	0.00183 (FG)	0.0002 U	0.00513 U	0.025 U
Indeno(1,2,3-cd)pyrene	0.005 U	0.005 U	0.005 U	0.000736 (G)	0.000736 (G)	0.0002 U	0.00513 U	0.025 U

Nº	Revision	Date	Initial

LEGEND

- PROPERTY BOUNDARY
- HISTORICAL ACID AND CYANIDE WASTE LINES (AOI 40)
- SITE SECTION DESIGNATION
- FENCE LINE
- RAILROAD
- APPROXIMATE EXTENT OF LNAPL BASED ON LIF AND IN WELL MEASUREMENTS
- PROPERTY SWAP AREA
- CRA-726M EXISTING WELL SHALLOW
- CRA-726I EXISTING WELL INTERMEDIATE
- CRA-726D EXISTING WELL DEEP
- CRA-409M-S ABANDONED WELL SHALLOW
- CRA-421M-D ABANDONED WELL INTERMEDIATE
- CRA-TP-011 TEST PIT
- CRA-707SB SOIL BORING
- CRA-821GP EXISTING GAS PROBE

0 50 150ft

LOCATION — PARAMETER

MW-7 [2]	11/6/1984 mg/L	9/21/1989 mg/L
VOCs		
Benzene	4.99 (BC)	0.21 (BC)
Ethylbenzene	0.001 U	0.01 U
Tetrachloroethene		0.01 U
Toluene	0.001 U	0.01 U
Trichloroethene		0.01 U
Xylenes (total)	-	0.01 U

DATE — UNITS — EXCEEDANCES

NOTES:

[1] LOCATION SCREENED AGAINST RESIDENTAL CRITERIA
[2] ASSUMED SHALLOW UNIT
U- CONSTITUENT NOT DETECTED ABOVE METHOD DETECTION LIMIT
J- ESTIMATED VALUE

NOTE: DATA PRESENTED IN THE DATABOXES IS ONLY FOR THE CONSTITUENTS OF CONCERN (COC) AS DEFINED IN THE REPORT TEXT. IF A COC WAS NEVER SAMPLED FOR AT A LOCATION, THAT COC IS NOT SHOWN IN THE DATABOX FOR THAT LOCATION.

SCALE VERIFICATION

THIS BAR MEASURES 1" ON ORIGINAL. ADJUST SCALE ACCORDINGLY.

Approved

Groundwater Screening Criteria
(C) - Residential Groundwater Volatilization to Indoor Air Inhalation Criteria
(E) - Non-residential Groundwater Volatilization to Indoor Air Inhalation Criteria
(F) - Groundwater Contact Criteria
(G) - Water Solubility
(H) - Flammability & Explosivity Screening Levels
(I) - Acute Inhalation Screening Levels

DRAWING STATUS

Status	Date	Initial

GROUNDWATER SELECTED PATHWAY SUMMARY -SITEWIDE
2013 RFI REPORT
YPSILANTI, MICHIGAN
WILLOW RUN POWERTRAIN

CONESTOGA-ROVERS & ASSOCIATES

Source Reference:

Project Manager:	Reviewed By:	Date:	
B.LANDALE	L.JERDON	JUNE 2013	
Scale: 1"=150'	Project Nº: 017358-T01	Report Nº: 023	Drawing Nº: 3.8

017358-T01(023)GN-DE048 JUL 31/2013

CRA-703I	3/14/2012 (4-6) ft BGS mg/kg
Metals	
Selenium	0.42 J (D)

CRA-705M	1/18/2012 (0-2) ft BGS mg/kg	1/18/2012 (2-3) ft BGS mg/kg
Metals		
Magnesium	10000 (BJ)/14000 (B)	14000 (B)
Selenium	0.67 (D)/0.59 (D)	-

CRA-707SB	1/18/2012 (0-2) ft BGS mg/kg	1/18/2012 (2-3) ft BGS mg/kg
Metals		
Arsenic	-	8.7 (BCDP)
Iron	13000 (BC)	14000 (BC)
Selenium	0.47 (D)	0.54 (D)

CRA-706M	1/18/2012 (0-2) ft BGS mg/kg
Metals	
Selenium	0.52 (D)

CRA-710M	1/18/2012 (0-2) ft BGS mg/kg	1/18/2012 (2-4) ft BGS mg/kg
Metals		
Arsenic	6.2 (BCD)	6.8 (BCD)
Selenium	0.71 (D)	0.44 (D)

CRA-833M	1/19/2012 (0-2) ft BGS mg/kg	1/19/2012 (3-5) ft BGS mg/kg
Metals		
Arsenic	-	7.5 (BCD)
Iron	-	16000 (BC)
Selenium	0.48 (D)	0.63 (D)

CRA-708SB	1/18/2012 (0-2) ft BGS mg/kg	1/18/2012 (2-3) ft BGS mg/kg
Metals		
Arsenic	6.8 (BCD)	5.9 (BCD)
Iron	15000 (BC)	-
Manganese	600 J (BCD)	-
Selenium	1.1 (D)	-

CRA-834M	1/18/2012 (0-2) ft BGS mg/kg	1/18/2012 (3-5) ft BGS mg/kg
Metals		
Arsenic	-	7.7 (BCDP)
Manganese	-	710 J (BCD)
Selenium	0.48 (D)	0.73 (D)

CRA-709M	1/17/2012 (0-2) ft BGS mg/kg	1/17/2012 (2-4) ft BGS mg/kg
Metals		
Arsenic	5.9 (BCD)	-
Selenium	0.44 (D)	0.62 (D)

CRA-835SB	1/19/2012 (2-4) ft BGS mg/kg
Metals	
Selenium	0.44 (D)

CRA-828M	1/17/2012 (0-2) ft BGS mg/kg
Metals	
Selenium	0.71 (D)

CRA-829M	1/17/2012 (2.5-4.5) ft BGS mg/kg
Metals	
Selenium	0.7 (D)

CRA-342M	8/23/2004 (2.8-3.3) ft BGS mg/kg
Metals	
Arsenic	7.3 (BCD)
Cobalt	6.9 (BCD)

CRA-702SB	2/21/2012 (1-2) ft BGS mg/kg	2/21/2012 (2-4) ft BGS mg/kg
Metals		
Aluminum	-	10000 (BC)
Magnesium	51000 (BC)	-
Selenium	-	0.49 (D)

CRA-826ML	3/14/2012 (1-3) ft BGS mg/kg
Metals	
Arsenic	6.5 (BCD)
Iron	16000 (BC)
Selenium	0.52 J (D)

CRA-857SB	3/21/2013 (5-7) ft BGS mg/kg
VOCs	
1,1-Dichloroethene	0.12 (F)

CRA-712I	2/22/2012 (4-6) ft BGS mg/kg
VOCs	
Trichloroethene	0.12 (BC)

CRA-745M	3/23/2012 (0-2) ft BGS mg/kg	3/23/2012 (5.5-7.5) ft BGS mg/kg
Metals		
Aluminum	8100 (BC)	-
Cobalt	11 (BCD)	-
Manganese	-	470 (BCD)
Selenium	1.7 (D)	-

CRA-725I	3/12/2012 (0-2) ft BGS mg/kg
Metals	
Manganese	540 (BCD)

CRA-744M	3/21/2012 (0-2) ft BGS mg/kg	3/21/2012 (2-4) ft BGS mg/kg
Metals		
Iron	14000 (BC)	-
Selenium	-	0.59 (D)

CRA-728SB	3/19/2012 (0-2) ft BGS mg/kg
Metals	
Arsenic	8.8 (BCDP)

CRA-742D	3/21/2012 (0-2) ft BGS mg/kg
Metals	
Selenium	0.44 (D)

CRA-747SB	3/21/2012 (0-2) ft BGS mg/kg
Metals	
Selenium	0.52 (D)

CRA-749M	3/21/2012 (0-2) ft BGS mg/kg	3/21/2012 (3-5) ft BGS mg/kg
Metals		
Arsenic	9.1 (BCDP)	6.6 (BCD)
Iron		13000 (BC)
Selenium	0.9 (D)	-
SVOCs		
2-Methylnaphthalene	7.1 (D)	-
Naphthalene	4.8 (D)	-
Phenanthrene	2.9 (D)	-
VOCs		
Benzene	0.56 (BC)	-
Ethylbenzene	1.2 (D)	-
Xylenes (total)	6.7 (BCD)	-

CRA-748SB	3/23/2012 (1.5-3.5) ft BGS mg/kg	3/23/2012 (7-9) ft BGS mg/kg
Metals		
Selenium	0.68 (D)	0.5 (D)/0.45 (D)

CRA-750M	3/21/2012 (0-2) ft BGS mg/kg	3/21/2012 (4-6) ft BGS mg/kg
Metals		
Arsenic	40 J (BCDPQ)	-
Iron	20000 J (BC)	13000 (BC)
VOCs		
Tetrachloroethene	0.87 (BC)/0.85 (BC)	4.7 (BCD)

CRA-751M	3/21/2012 (0-2) ft BGS mg/kg	3/21/2012 (6.5-8.5) ft BGS mg/kg
VOCs		
Tetrachloroethene	0.31 (BC)	0.21 (BC)

CRA-752M	3/23/2012 (1.5-3.5) ft BGS mg/kg
Metals	
Arsenic	250 (BCDPQ)
Iron	97000 (BC)
Selenium	13 (BCD)

CRA-753M	3/22/2012 (7.5-9.5) ft BGS mg/kg
Metals	
Selenium	0.75 (D)

CRA-855SB	3/21/2013 (4-6) ft BGS mg/kg
VOCs	
Tetrachloroethene	0.27 (BC)

CRA-856SB	3/21/2013 (3-5) ft BGS mg/kg	3/21/2013 (5-7) ft BGS mg/kg
Metals		
Aluminum	8000 (BC)	-
VOCs		
Tetrachloroethene	-	47 (BCDFG)
Trichloroethene	-	1 J (BC)

CRA-785D	3/23/2012 (2.5-4.5) ft BGS mg/kg
Metals	
Arsenic	16 (BCDP)
Manganese	810 (BCD)

CRA-711I	2/27/2012 (0-2) ft BGS mg/kg	2/27/2012 (5-7) ft BGS mg/kg
Metals		
Arsenic	6 (BCD)	-
Iron	14000 (BC)	-
Manganese	650 (BCD)/470 (BCD)	-
VOCs		
Tetrachloroethene	-	26 (BCDFG)
Trichloroethene	-	0.24 J (BC)

NORTH PERIMETER

AOI 40 HISTORICAL ACID AND CYANIDE WASTE LINES

B-005 TRUCK MARSHALLING & TRAILER YARD

OUTFALL 004 & 005

No	Revision	Date	Initial

LEGEND

- PROPERTY BOUNDARY
- HISTORICAL ACID AND CYANIDE WASTE LINES (AOI 40)
- SITE SECTION DESIGNATION
- FENCE LINE
- APPROXIMATE EXTENT OF LNAPL BASED ON LIF AND IN WELL MEASUREMENTS
- PROPERTY SWAP AREA
- CRA-726M EXISTING WELL SHALLOW
- CRA-726I EXISTING WELL INTERMEDIATE
- CRA-726D EXISTING WELL DEEP
- CRA-409M-S ABANDONED WELL SHALLOW
- CRA-421M-D ABANDONED WELL INTERMEDIATE
- CRA-TP-011 TEST PIT
- CRA-707SB SOIL BORING
- CRA-821GP EXISTING GAS PROBE

0 100 200ft

LOCATION — CRA-834M | 1/18/2012 (0-2) ft BGS mg/kg | 1/18/2012 (3-5) ft BGS mg/kg — DATE / DEPTH / UNITS

PARAMETER — Metals: Arsenic - | 7.7 (BCDP) — EXCEEDS NOTED CRITERIA AND SSBL; Manganese - | 710 J (BCD) — EXCEEDS NOTED CRITERIA; Selenium 0.48 (D) | 0.73 (D)

NOTES:

U- CONSTITUENT NOT DETECTED ABOVE METHOD DETECTION LIMIT
J- ESTIMATED VALUE

NOTE: DATA PRESENTED IN THE DATABOXES IS ONLY FOR THE CONSTITUENTS OF CONCERN (COC) AS DEFINED IN THE REPORT TEXT. IF A COC WAS NEVER SAMPLED FOR AT A LOCATION, THAT COC IS NOT SHOWN IN THE DATABOX FOR THAT LOCATION.

SCALE VERIFICATION

THIS BAR MEASURES 1" ON ORIGINAL. ADJUST SCALE ACCORDINGLY.

Approved

Soil Screening Criteria

- (A) - Statewide Default Background Level
- (B) - Residential Drinking Water Protection Criteria
- (C) - Non-residential Drinking Water Protection Criteria
- (Cs) - Groundwater Surface Water Interface Protection Criteria
- (E) - Groundwater Contact Protection Criteria
- (F) - Residential Volatilization to Indoor Air Inhalation
- (G) - Non-Residential Volatilization to Indoor Air Inhalation
- (H) - Residential Infinite Source Volatile Soil Inhalation Criteria (VSIC)
- (I) - Non-residential Infinite Source Volatile Soil Inhalation Criteria (VSIC)
- (J) - Residential Finite VSIC for 5 M Source Thickness
- (K) - Non-residential Finite VSIC for 5 M Source Thickness
- (L) - Residential Finite VSIC for 2 M Source Thickness
- (M) - Non-residential Finite VSIC for 2 M Source Thickness
- (N) - Residential Particulate Soil Inhalation Criteria
- (O) - Non-residential Particulate Soil Inhalation Criteria
- (P) - Residential Direct Contact Criteria
- (Q) - Non-residential Direct Contact Criteria
- (R) - Soil Saturation Concentration Screening

DRAWING STATUS

Status	Date	Initial

SOIL SELECTED PATHWAY SUMMARY - PERIMETER
2013 RFI REPORT

YPSILANTI, MICHIGAN

WILLOW RUN POWERTRAIN

CONESTOGA-ROVERS & ASSOCIATES

Source Reference:

Project Manager:	Reviewed By:	Date:	
B.LANDALE	L. JERDON	JUNE 2013	
Scale: 1"=200'	Project N°: 017358-T01	Report N°: 023	Drawing N°: 3.9

017358-T01(023)GN-DE059 AUG 14/2013

CRA-701M	4/20/2012 mg/L	8/7/2012 mg/L
Metals		
Aluminum	-	5.5 (AB)
Iron	-	5.4 (AB)
Lead	-	0.0058 (AB)
Manganese	0.13 (AB)	0.46 (AB)
Vanadium	-	0.014 (A)

CRA-703I	4/20/2012 mg/L	8/3/2012 mg/L	4/12/2013 mg/L
Inorganics			
Arsenic	-	-	0.016 (ABC)
Iron	-	-	2.7 (AB)
Manganese	-	-	0.12 (AB)
Metals			
Arsenic	0.013 (ABC)	0.022 (ABC)/0.023 (ABC)	-
Iron	2 (AB)	3.6 (AB)/3.8 (AB)	-
Manganese	0.15 (AB)	0.13 (AB)/0.13 (AB)	-
Sodium	230 (A)	-	-

CRA-703M	4/20/2012 mg/L	8/3/2012 mg/L	4/12/2013 mg/L
Inorganics			
Manganese	-	-	0.11 (AB)
Metals			
Aluminum	0.058 (AB)	0.061 (AB)	-
Iron	-	0.36 (AB)	-
Manganese	0.49 (AB)/0.5 (AB)	0.3 (AB)	-
Sodium	190 (A)/200 (A)	-	-

CRA-264M	12/1/1989 mg/L	3/1/1990 mg/L	1/23/2012 mg/L	4/17/2013 mg/L
Inorganics				
Iron	-	-	-	0.44 (AB)
Manganese	-	-	-	0.19 (AB)
Metals				
Iron	-	-	0.34 (AB)/0.44 (AB)	-
Manganese	-	-	0.2 (AB)/0.2 (AB)	-
PCBs				
Aroclor-1248 (PCB-1248)	0.0031 (ABC)/0.006 (ABCF)	0.00077 (ABC)	-	-

CRA-709M	1/24/2012 mg/L	8/3/2012 mg/L	4/16/2013 mg/L
Inorganics			
Manganese	-	-	0.061 (AB)
Metals			
Aluminum	0.42 (AB)	0.067 (AB)	-
Iron	0.45 (AB)	-	-
Manganese	0.099 (AB)	0.1 (AB)	-

CRA-710M	1/23/2012 mg/L	4/16/2013 mg/L
Inorganics		
Manganese	-	0.11 (AB)
Metals		
Aluminum	35 (AB)	-
Arsenic	0.017 (ABC)	-
Chromium	0.021 (C)	-
Copper	0.033 (C)	-
Iron	24 (AB)	-
Lead	0.027 (AB)	-
Manganese	0.25 (AB)	-
Vanadium	0.047 (AC)	-

CRA-706M	1/24/2012 mg/L	8/3/2012 mg/L	4/16/2013 mg/L
Inorganics			
Manganese	-	-	0.11 (AB)
Metals			
Aluminum	0.44 (AB)	-	-
Iron	0.6 (AB)	-	-
Manganese	0.11 (AB)	0.11 (AB)	-

CRA-833M	1/24/2012 mg/L	4/17/2013 mg/L
Inorganics		
Aluminum	-	0.14 (AB)
Iron	-	0.99 (AB)
Manganese	-	0.21 (AB)
Metals		
Aluminum	0.43 (AB)	-
Iron	0.76 (AB)	-
Manganese	0.19 (AB)	-

CRA-834M	1/24/2012 mg/L
Metals	
Aluminum	0.1 (AB)
Manganese	0.051 (AB)

CRA-266M	1/23/2012 mg/L
Metals	
Manganese	0.06 (AB)

CRA-2188-A	5/2/1997 mg/L
Metals	
Arsenic	0.1 (ABC)
Cadmium	0.014 (ABC)/0.214 (ABC)
Chromium	0.026 (C)
Copper	0.13 (C)/0.13 (C)
Lead	0.1 (ABC)/0.1 (ABC)
Selenium	0.0088 (C)/0.0088 (C)
Zinc	0.41 (C)/0.41 (C)
SVOCs	
bis(2-Ethylhexyl)phthalate (DEHP)	0.008 (AB)/0.008 (AB)

CRA-2148-A	5/1/1997 mg/L	8/18/2004 mg/L	1/22/2007 mg/L
Metals			
Iron	-	2.6 (AB)/2.7 (AB)	1.21 (AB)
Manganese	-	0.24 (AB)/0.23 (AB)	0.282 (AB)
SVOCs			
bis(2-Ethylhexyl)phthalate (DEHP)	0.01 (AB)/0.01 (AB)	-	-

CRA-342M	8/25/2004 mg/L	1/23/2007 mg/L	3/17/2008 mg/L	9/14/2010 mg/L	4/17/2012 mg/L	4/2/2013 mg/L
Inorganics						
Aluminum	-	-	-	-	-	0.051 (AB)
Manganese	-	-	-	-	-	0.073 (AB)
Metals						
Aluminum	20.9 (AB)	-	-	0.0617 (AB)	-	-
Arsenic	0.033 (ABC)	-	-	-	-	-
Chromium	0.039 (C)	-	-	-	-	-
Copper	0.093 (C)	-	-	-	-	-
Iron	27.2 (AB)	-	-	-	-	-
Lead	0.023 (AB)	-	-	-	-	-
Manganese	0.57 (AB)	0.052 (AB)	0.137 (AB)	0.129 (AB)	0.066 (AB)	-
Vanadium	0.078 (ABC)	-	-	-	-	-

CRA-343M	8/25/2004 mg/L	1/23/2007 mg/L	3/17/2008 mg/L	9/14/2010 mg/L
Metals				
Aluminum	-	0.0586 (AB)	0.297 (AB)	0.144 (AB)
Iron	0.58 (AB)	-	-	-
Manganese	0.12 (AB)	-	-	-
Vanadium	-	-	0.0059 (A)	-

CRA-217M	1/23/2007 mg/L
Metals	
Iron	1.36 (AB)
Manganese	0.362 (AB)

CRA-321M	8/17/2004 mg/L	1/23/2007 mg/L	3/17/2008 mg/L	9/14/2010 mg/L
Metals				
Iron	0.98 (AB)	1.26 (AB)	1.41 (AB)	1.36 (AB)
Manganese	0.11 (AB)	0.165 (AB)	0.232 (AB)	0.163 (AB)
Mercury	0.000038 (JC)	-	-	-

CRA-826M	4/18/2012 mg/L	4/2/2013 mg/L
Inorganics		
Iron	-	1.3 (AB)
Manganese	-	0.19 (AB)
Metals		
Iron	0.92 (AB)	-
Manganese	0.35 (AB)	-

CRA-322M	8/17/2004 mg/L	1/23/2007 mg/L	3/20/2008 mg/L	9/14/2010 mg/L
Metals				
Aluminum	-	-	0.115 (AB)	-
Arsenic	0.016 (ABC)	-	-	-
Iron	0.52 (AB)	0.376 (AB)	0.43 (AB)	-
Manganese	0.053 (AB)	0.0538 (AB)	0.052 (AB)	0.0925 (AB)
Mercury	-	-	0.00012 (JC)	-

CRA-225M	8/1/2000 mg/L	8/21/2000 mg/L
SVOCs		
Benzo(g,h,i)perylene	0.00163 (ABFG)	0.00163 (ABFG)
Fluoranthene	0.00212 (C)	0.00212 (C)

CRA-323M	1/23/2007 mg/L
Metals	
Iron	2.71 (AB)
Manganese	0.409 (AB)

CRA-344M	8/25/2004 mg/L	1/24/2007 mg/L
Metals		
Aluminum	-	0.0502 (AB)
Arsenic	0.016 (ABC)/0.015 (ABC)	-
Iron	3.9 (AB)/3.8 (AB)	6.17 (AB)
Manganese	0.57 (AB)/0.56 (AB)	0.72 (AB)

CRA-416M	3/27/2008 mg/L	9/16/2010 mg/L
Metals		
Manganese	1.22 (AB)	0.703 (AB)

CRA-251M	8/17/2004 mg/L	1/23/2007 mg/L
Metals		
Aluminum	0.091 (AB)	-
Arsenic	0.012 (ABC)	-
Iron	2.2 (AB)	1.9 (AB)
Manganese	0.16 (AB)	0.442 (AB)
Mercury	0.000043 (JC)	-

CRA-345M	8/25/2004 mg/L	1/23/2007 mg/L
Metals		
Iron	0.56 (AB)	-
Manganese	0.12 (AB)	0.0831 (AB)

CRA-837M	4/17/2012 mg/L	4/2/2013 mg/L
Inorganics		
Aluminum	-	0.15 (AB)
Arsenic	-	0.012 (ABC)
Iron	-	5.8 (AB)
Manganese	-	0.16 (AB)
Metals		
Aluminum	0.27 (AB)	-
Manganese	0.071 (AB)	-

CRA-615M	9/16/2010 mg/L
Metals	
Manganese	0.0794 (AB)

CRA-346M	8/25/2004 mg/L	1/24/2007 mg/L
Metals		
Aluminum	0.25 (AB)	0.962 (AB)
Iron	0.98 (AB)	1.5 (AB)

CRA-614M	9/16/2010 mg/L
Metals	
Aluminum	0.0626 (AB)

CRA-228M	8/16/2004 mg/L	1/24/2007 mg/L
Metals		
Aluminum	-	0.131 (AB)
Iron	3.2 (AB)	2.08 (AB)
Lead	0.0059 (AB)	-
Manganese	0.2 (AB)	0.151 (AB)

CRA-613M	3/27/2008 mg/L	9/16/2010 mg/L
Metals		
Aluminum	5.07 (AB)	0.0566 (AB)
Iron	6.94 (AB)	-
Vanadium	0.02 (A)	-

CRA-827M	4/8/2013 mg/L
Inorganics	
Manganese	0.16 (AB)

CRA-612M	3/27/2008 mg/L	9/16/2010 mg/L
Metals		
Aluminum	0.137 (AB)/0.128 (AB)	1.72 (AB)
Iron	0.328 (AB)	2.23 (AB)
Manganese	-	0.0606 (AB)
Vanadium	-	0.0066 (A)

CRA-324M	8/18/2004 mg/L	1/24/2007 mg/L
Metals		
Aluminum	-	1.2 (AB)
Iron	0.77 (AB)	2.28 (AB)
Manganese	0.08 (AB)	-
Vanadium	-	0.0061 (A)

CRA-347M	8/25/2004 mg/L	1/24/2007 mg/L
Metals		
Aluminum	1.2 (AB)	0.171 (AB)/0.149 (AB)
Iron	2.1 (AB)	-
Vanadium	0.0055 (A)	-

CRA-611M	3/27/2008 mg/L	9/16/2010 mg/L
Metals		
Aluminum	-	0.0751 (AB)
Iron	0.819 (AB)	-
Manganese	0.174 (AB)	0.0666 (AB)

CRA-610M	9/17/2010 mg/L	4/17/2012 mg/L	4/8/2013 mg/L
Inorganics			
Aluminum	-	-	0.15 (AB)
Metals			
Aluminum	0.529 (AB)	3 (AB)	-
Iron	0.521 (AB)	2.7 (AB)	-
Vanadium	-	0.0083 (A)	-

CRA-765I	4/23/2012 mg/L	4/10/2013 mg/L
Inorganics		
Aluminum	-	0.058 (AB)
Arsenic	-	0.02 (ABC)
Iron	-	0.89 (AB)
Manganese	-	0.061 (AB)
Metals		
Aluminum	0.2 (AB)	-
Arsenic	0.019 (ABC)	-
Manganese	0.089 (AB)	-

CRA-133M	8/17/2004 mg/L	1/24/2007 mg/L	3/20/2008 mg/L	9/14/2010 mg/L	4/17/2012 mg/L	4/10/2013 mg/L
Inorganics						
Iron	-	-	-	-	-	3 (AB)
Manganese	-	-	-	-	-	0.56 (AB)
Metals						
Aluminum	-	0.0708 (AB)	-	0.165 (AB)	-	-
Iron	3.5 (AB)	2.62 (AB)	7.26 (AB)	2.84 (AB)	3.5 (AB)	-
Manganese	0.33 (AB)	0.148 (AB)	0.404 (AB)	0.308 (AB)	0.39 (AB)	-

CRA-704M	4/25/2012 mg/L	8/3/2012 mg/L	4/10/2013 mg/L
Inorganics			
Iron	-	-	0.82 (AB)
Manganese	-	-	0.27 (AB)
Metals			
Iron	-	0.39 (AB)	-
Manganese	0.11 (AB)	0.42 (AB)	-

CRA-828M	1/23/2012 mg/L	4/2/2013 mg/L
Inorganics		
Manganese	-	0.072 (AB)
Metals		
Aluminum	1.4 (AB)	-
Iron	1.1 (AB)	-
Manganese	0.1 (AB)	-

CRA-629M	1/23/2012 mg/L	4/2/2013 mg/L
Inorganics		
Aluminum	-	0.11 (AB)
Iron	-	0.34 (AB)
Manganese	-	0.41 (AB)
Metals		
Aluminum	0.35 (AB)	-
Iron	0.46 (AB)	-
Manganese	0.23 (AB)	-

CRA-704D	4/25/2012 mg/L	4/10/2013 mg/L	4/11/2013 mg/L
Inorganics			
Aluminum	-	1.4 (AB)	1.4 (AB)
Iron	-	0.06 (AB)	-
Manganese	-	-	-
Metals			
Aluminum	16 (AB)	-	-
Chromium	0.019 (C)	-	-
Iron	12 (AB)	-	-
Lead	0.0045 (AB)	-	-
Manganese	0.15 (AB)	-	-
Vanadium	0.036 (AC)	-	-

CRA-704	4/25/2012 mg/L	4/10/2013 mg/L
Inorganics		
Iron	-	0.52 (AB)
Manganese	-	0.11 (AB)
Metals		
Aluminum	0.41 (AB)	-
Arsenic	0.011 (ABC)	-
Iron	0.79 (AB)	-
Manganese	0.21 (AB)	-

CRA-704I	4/25/2012 mg/L	8/3/2012 mg/L	4/10/2013 mg/L
Inorganics			
Iron	-	-	0.82 (AB)
Manganese	-	-	0.27 (AB)
Metals			
Iron	-	0.39 (AB)	-
Manganese	0.11 (AB)	0.42 (AB)	-

CRA-206M	8/18/2004 mg/L	1/22/2007 mg/L	3/20/2008 mg/L	9/16/2010 mg/L	4/17/2012 mg/L	4/2/2013 mg/L
Inorganics						
Iron	-	-	-	-	-	2 (AB)
Manganese	-	-	-	-	-	0.35 (AB)
Metals						
Aluminum	-	0.0503 (AB)	-	-	-	-
Iron	5.7 (AB)	2.56 (AB)	2.84 (AB)	4.34 (AB)	3.6 (AB)	-
Manganese	0.7 (AB)	0.326 (AB)	0.503 (AB)	0.702 (AB)	0.6 (AB)	-
Mercury	-	-	0.00014 (JC)	-	-	-

CRA-320M	8/18/2004 mg/L	4/2/2013 mg/L
Inorganics		
Selenium	-	0.0052 (C)
Metals		
Iron	0.77 (AB)	-

CRA-213M-A	5/1/1997 mg/L
SVOCs	
bis(2-Ethylhexyl)phthalate (DEHP)	0.037 (ABC)/0.037 (ABC)

CRA-402M-S	1/25/2007 mg/L	9/10/2010 mg/L
Metals		
Manganese	0.0852 (AB)	0.244 (AB)

CRA-401M-D	1/25/2007 mg/L	3/21/2008 mg/L	9/10/2010 mg/L
Metals			
Aluminum	2.19 (AB)	-	0.173 (AB)
Iron	5.18 (AB)	-	0.344 (AB)
Manganese	0.327 (AB)	0.198 (AB)	0.333 (AB)
Vanadium	0.0071 (A)	-	-

CRA-050M	8/18/2004 mg/L
Metals	
Iron	1.7 (AB)
Wet	
Cyanide (total)	0.0077 (C)

CRA-052M	8/18/2004 mg/L	1/25/2007 mg/L	3/21/2008 mg/L	9/10/2010 mg/L
Metals				
Aluminum	-	-	0.148 (AB)/0.104 (AB)	0.0668 (AB)
Arsenic	0.018 (ABC)	0.015 (ABC)	0.02 (ABC)/0.0208 (ABC)	0.023 (ABC)
Iron	7 (AB)	3.14 (AB)	4.17 (AB)/4.2 (AB)	4.59 (AB)
Manganese	0.16 (AB)	0.109 (AB)	0.118 (AB)/0.123 (AB)	0.123 (AB)

CRA-219M	10/10/2000 mg/L
Metals	
Lead	0.036 (AB)

CRA-423M	3/26/2008 mg/L	9/17/2010 mg/L
Metals		
Aluminum	-	0.0118 (ABC)
Iron	0.9 (AB)/0.915 (AB)	2.06 (AB)
Manganese	0.309 (AB)/0.31 (AB)	0.468 (AB)

CRA-726I	4/25/2012 mg/L	4/10/2013 mg/L
Inorganics		
Manganese	-	0.052 (AB)
Metals		
Aluminum	0.34 (AB)	-
Arsenic	0.072 (ABC)	-
Iron	4.4 (AB)	-
Manganese	3.1 (AB)	-

CRA-600M	3/28/2008 mg/L	9/13/2010 mg/L
Metals		
Arsenic	-	0.0135 (ABC)
Iron	1.14 (AB)	1.67 (AB)
Manganese	0.544 (AB)	0.152 (AB)

CRA-221M	5/2/1997 mg/L
Metals	
Arsenic	0.02 (ABC)
Cadmium	0.006 (AB)
Copper	0.095 (C)
SVOCs	
bis(2-Ethylhexyl)phthalate (DEHP)	0.058 (ABC)
VOCs	
Benzene	0.028 (AB)

CRA-726D	4/25/2012 mg/L	4/10/2013 mg/L	4/11/2013 mg/L
Inorganics			
Aluminum	-	3.5 (AB)	29 (AB)
Arsenic	-	0.012 (ABC)	0.02 (ABC)
Chromium	-	-	0.053 (C)
Copper	-	-	0.034 (C)
Iron	-	5.2 (AB)	44 (AB)
Lead	-	-	0.015 (AB)
Manganese	-	0.072 (AB)	0.69 (AB)
Vanadium	-	0.01 (A)	0.078 (ABC)
Metals			
Aluminum	0.2 (AB)	-	-
Manganese	0.056 (AB)	-	-

CRA-601M	3/28/2008 mg/L	9/13/2010 mg/L
Metals		
Aluminum	0.797 (AB)	-
Iron	0.404 (AB)	-
Manganese	0.0611 (AB)	0.11 (AB)

CRA-725M	4/24/2012 mg/L	4/15/2013 mg/L
Inorganics		
Aluminum	-	0.11 (AB)
Metals		
Aluminum	0.065 (AB)	-

CRA-725I	4/24/2012 mg/L	4/15/2013 mg/L
Inorganics		
Manganese	-	0.11 (AB)/0.12 (AB)
Metals		
Manganese	0.1 (AB)/0.1 (AB)	-

CRA-745M	4/19/2012 mg/L	4/4/2013 mg/L
Inorganics		
Iron	-	4.6 (AB)/4.5 (AB)
Manganese	-	1.6 (AB)/1.5 (AB)
Mercury	-	0.00028 (C)
Metals		
Iron	2.2 (AB)	-
Manganese	1.8 (AB)	-

CRA-744M	4/19/2012 mg/L	4/3/2013 mg/L
Inorganics		
Iron	-	3.7 (AB)
Manganese	-	0.52 (AB)
Metals		
Manganese	0.15 (AB)	-
Selenium	0.0054 (C)	-

CRA-749M	4/19/2012 mg/L
Metals	
Manganese	0.086 (AB)

CRA-606M	4/24/2012 mg/L
Metals	
Aluminum	0.13 (AB)
Iron	2.5 (AB)
Manganese	0.25 (AB)

CRA-566M	3/4/2004 mg/L
Metals	
Iron	0.87 (AB)

CRA-603M	9/13/2010 mg/L
Metals	
Aluminum	0.577 (AB)
Arsenic	0.0105 (ABC)
Iron	0.284 (AB)
Vanadium	0.0225 (A)

CRA-604M	3/27/2008 mg/L
Metals	
Manganese	0.201 (AB)

CRA-609M	3/27/2008 mg/L	9/14/2010 mg/L	4/23/2012 mg/L	4/10/2013 mg/L
Inorganics				
Iron	-	-	-	1.4 (AB)
Manganese	-	-	-	0.42 (AB)
Metals				
Aluminum	0.126 (AB)	-	0.15 (AB)	-
Iron	0.969 (AB)	1.5 (AB)	0.99 (AB)	-
Manganese	0.704 (AB)	0.542 (AB)	0.66 (AB)	-

CRA-742I	4/23/2012 mg/L	4/10/2013 mg/L
Inorganics		
Iron	-	0.59 (AB)
Manganese	-	0.27 (AB)
Metals		
Iron	5 (AB)/5 (AB)	-
Manganese	0.33 (AB)/0.33 (AB)	-

CRA-742D	4/23/2012 mg/L	4/10/2013 mg/L	4/11/2013 mg/L
Inorganics			
Aluminum	-	4.7 (AB)	17 (AB)
Chromium	-	-	0.032 (C)
Iron	-	5.3 (AB)	26 (AB)
Lead	-	-	0.0098 (AB)
Manganese	-	0.084 (AB)	0.39 (AB)
Vanadium	-	0.012 (A)	0.049 (AC)
Metals			
Aluminum	270 (AB)	-	-
Arsenic	0.23 (ABC)	-	-
Barium	2.1 (ABC)	-	-
Beryllium	0.019 (AB)	-	-
Cadmium	0.0091 (ABC)	-	-
Chromium	0.61 (ABC)	-	-
Cobalt	0.24 (ABC)	-	-
Copper	0.5 (C)	-	-
Iron	660 (AB)	-	-
Lead	0.21 (ABC)	-	-
Magnesium	730 (A)	-	-
Manganese	15 (ABC)	-	-
Mercury	0.000032 (JC)	-	-
Nickel	0.65 (ABC)	-	-
Selenium	0.017 (C)	-	-
Silver	0.0012 (C)	-	-
Thallium	0.0068 (ABC)	-	-
Vanadium	0.96 (ABC)	-	-
Zinc	1.3 (C)	-	-

CRA-607M	3/26/2008 mg/L	9/13/2010 mg/L
Metals		
Manganese	0.0844 (AB)	
Selenium	0.0068 (C)	-

CRA-750M	4/17/2012 mg/L	4/4/2013 mg/L
Inorganics		
Aluminum	-	0.12 (AB)
Manganese	-	0.55 (AB)
Metals		
Manganese	0.52 (AB)/0.51 (AB)	-
VOCs		
Tetrachloroethene	0.18 (ABC)/0.18 (ABC)	0.13 (ABC)
Trichloroethene	0.014 (AB)/0.014 (AB)	0.049 (AB)

CRA-751M	4/17/2012 mg/L	4/4/2013 mg/L
Inorganics		
Aluminum	-	0.15 (AB)
Manganese	-	1.4 (AB)
Metals		
Aluminum	0.19 (AB)	-
Manganese	0.87 (AB)	-

CRA-608M	9/13/2010 mg/L
Metals	
Manganese	0.131 (AB)/0.112 (AB)

CRA-764M	4/19/2012 mg/L	4/4/2013 mg/L
Inorganics		
Arsenic	-	0.018 (ABC)
Iron	-	1.3 (AB)
Manganese	-	0.065 (AB)
Mercury	-	0.00027 (C)
Metals		
Aluminum	0.14 (AB)	-
Arsenic	0.016 (ABC)	-
Iron	0.88 (AB)	-
Manganese	0.074 (AB)	-

CRA-140M	2/9/1993 mg/L	8/17/2004 mg/L	1/25/2007 mg/L	3/26/2008 mg/L	9/14/2010 mg/L
Metals					
Iron	0.01 (AB)	0.64 (AB)	-	-	-
Lead	-	-	0.15 (AB)	0.406 (AB)	-
Manganese	-	0.011 (C)	0.0143 (C)	0.0055 (C)	0.0056 (C)
Selenium	-	-	-	-	-

CRA-753M	4/17/2012 mg/L	4/4/2013 mg/L
Inorganics		
Manganese	-	0.22 (AB)
Metals		
Manganese	0.21 (AB)	-

CRA-752M	4/17/2012 mg/L	4/4/2013 mg/L
Inorganics		
Manganese	-	0.35 (AB)
Metals		
Manganese	0.58 (AB)	-

CRA-141M	8/17/2004 mg/L	1/25/2007 mg/L	3/26/2008 mg/L	9/14/2010 mg/L
Metals				
Iron	7.2 (AB)	1.2 (AB)	1.1 (AB)	2.14 (AB)
Manganese	1 (AB)	0.571 (AB)	0.538 (AB)	0.93 (AB)
Mercury	0.000045 (JC)	-	-	-

CRA-327M	8/17/2004 mg/L	1/24/2007 mg/L	3/26/2008 mg/L	9/14/2010 mg/L
Metals				
Aluminum	-	0.29 (AB)	0.0917 (AB)	1.85 (AB)
Copper	-	-	-	0.0766 (C)
Iron	0.87 (AB)	0.754 (AB)	-	6.38 (AB)
Lead	-	-	-	0.037 (AB)
Manganese	0.37 (AB)	0.115 (AB)	0.395 (AB)	0.61 (AB)
Vanadium	-	-	-	0.0047 (A)

CRA-609M	9/14/2010 mg/L	4/19/2012 mg/L	4/4/2013 mg/L
Metals			
Aluminum	-	0.12 (AB)	-
VOCs			
Trichloroethene	0.0078 (AB)	0.0052 (AB)	0.0057 (AB)

CRA-856M	4/5/2013 mg/L
Inorganics	
Manganese	0.18 (AB)
Selenium	0.0057 (C)
VOCs	
Tetrachloroethene	0.031 (AB)

CRA-263M	4/19/2012 mg/L	4/5/2013 mg/L
Inorganics		
Aluminum	-	0.23 (AB)
Arsenic	-	0.034 (ABC)
Selenium	-	0.0072 (C)
Vanadium	-	0.015 (A)
Metals		
Manganese	0.25 (AB)	-
VOCs		
cis-1,2-Dichloroethene	0.1 (AB)	-

CRA-719I	4/19/2012 mg/L	4/5/2013 mg/L
Inorganics		
Arsenic	-	0.025 (ABC)
Iron	-	1.5 (AB)
Metals		
Arsenic	0.018 (ABC)	-
Iron	1.1 (AB)	-
VOCs		
Vinyl chloride	0.0089 (AB)	0.01 (AB)

CRA-326M	8/17/2004 mg/L	1/24/2007 mg/L	9/14/2010 mg/L
Metals			
Aluminum	-	0.207 (AB)	-
Iron	20.1 (AB)/18.1 (AB)	13.3 (AB)	14.2 (AB)/14.6 (AB)
Manganese	2.29 (AB)/3.27 (AB)	0.322 (AB)	0.504 (AB)/0.526 (AB)
Mercury	0.000041 (JC)/0.000034 (JC)	-	-
VOCs			
Trichloroethene	-	0.0058 (AB)	-
SVOCs			
Total dissolved solids (TDS)	-	-	624 (AB)/629 (AB)

CRA-325M	8/17/2004 mg/L	1/24/2007 mg/L	3/20/2008 mg/L	9/14/2010 mg/L	4/18/2012 mg/L	4/8/2013 mg/L
Inorganics						
Aluminum	-	-	-	-	-	5.1 (AB)
Arsenic	-	-	-	-	-	0.41 (AB)
Iron	-	-	-	-	-	-
Manganese	-	-	-	-	-	-
Metals						
Aluminum	-	-	0.0624 (AB)	0.0823 (AB)/0.0718 (AB)	-	-
Arsenic	-	-	-	-	0.014 (ABC)	-
Iron	1.4 (AB)	-	-	0.783 (AB)/0.723 (AB)	9.6 (AB)	-
Manganese	0.48 (AB)	0.188 (AB)	0.259 (AB)	0.795 (AB)/0.867 (AB)	0.34 (AB)	-

CRA-618M	4/19/2012 mg/L	4/8/2013 mg/L
Inorganics		
Iron	-	17 (AB)
Manganese	-	0.47 (AB)
Metals		
Iron	16 (AB)	-
Manganese	0.54 (AB)	-

CRA-712I	4/19/2012 mg/L	4/8/2013 mg/L
Inorganics		
Arsenic	-	0.02 (ABC)
Iron	-	2.2 (AB)
Manganese	-	0.091 (AB)
Metals		
Iron	0.86 (AB)	-
Manganese	0.12 (AB)	-

CRA-765D	4/23/2012 mg/L	4/10/2013 mg/L	4/11/2013 mg/L
Inorganics			
Aluminum	-	1.9 (AB)	7.9 (AB)
Chromium	-	-	0.017 (C)
Iron	-	2 (AB)	9.3 (AB)
Lead	-	-	0.015 (AB)
Manganese	-	-	0.14 (AB)
Vanadium	-	0.0047 (A)	0.022 (A)
Metals			
Aluminum	16 (AB)	-	-
Chromium	0.026 (C)	-	-
Iron	14 (AB)	-	-
Lead	0.0049 (AB)	-	-
Manganese	0.2 (AB)	-	-
Vanadium	0.04 (AC)	-	-

CRA-711M	8/17/2004 mg/L	1/24/2007 mg/L	3/20/2008 mg/L	9/14/2010 mg/L	4/17/2012 mg/L	4/2/2013 mg/L
Inorganics						
Iron	-	-	-	-	-	0.35 (AB)
Manganese	-	-	-	-	-	0.41 (AB)
Metals						
Aluminum	-	-	-	-	-	0.23 (AB)
Arsenic	-	-	-	-	-	0.0077 (C)
Iron	-	-	-	-	-	0.015 (A)
Manganese	-	-	-	-	-	-
Mercury	-	-	-	-	-	-

CRA-753M	4/17/2012 mg/L	4/4/2013 mg/L
Inorganics		
Manganese	-	0.22 (AB)
Metals		
Manganese	0.21 (AB)	-

CRA-752M	4/17/2012 mg/L	4/4/2013 mg/L
Inorganics		
Manganese	-	0.35 (AB)
Metals		
Manganese	0.58 (AB)	-

CRA-608M	9/13/2010 mg/L
Metals	
Manganese	0.131 (AB)/0.112 (AB)

CRA-764M	4/19/2012 mg/L	4/4/2013 mg/L
Inorganics		
Arsenic	-	0.018 (ABC)
Iron	-	1.3 (AB)
Manganese	-	0.065 (AB)
Mercury	-	0.00027 (C)
Metals		
Aluminum	0.14 (AB)	-
Arsenic	0.016 (ABC)	-
Iron	0.88 (AB)	-
Manganese	0.074 (AB)	-

CRA-140M	2/9/1993 mg/L	8/17/2004 mg/L	1/25/2007 mg/L	3/26/2008 mg/L	9/14/2010 mg/L
Metals					
Iron	0.01 (AB)	0.64 (AB)	-	-	-
Lead	-	-	0.15 (AB)	0.406 (AB)	-
Manganese	-	0.011 (C)

CRA-810GP	4/30/2012 ug/m3
VOCs	
1,1,1-Trichloroethane	140 U
1,1,2-Trichloroethane	190 U
1,1-Dichloroethane	110 U
1,1-Dichloroethene	280 U
1,2,4-Trichlorobenzene	1600 U
1,2-Dibromoethane (Ethylene dibromide)	540 U
1,2-Dichlorobenzene	210 U
1,2-Dichloroethane	280 U
1,2-Dichloropropane	160 U
1,3-Dichlorobenzene	210 U
1,4-Dichlorobenzene	210 U
2-Butanone (Methyl ethyl ketone) (MEK)	1600
2-Hexanone	300
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	300
Acetone	11000
Benzene	55 J
Bromodichloromethane	180 U
Bromoform	360 U
Bromomethane (Methyl bromide)	270 U
Carbon disulfide	220 U
Carbon tetrachloride	440 U
Chlorobenzene	120 U
Chloroethane	190 U
Chloroform (Trichloromethane)	130 U
Chloromethane (Methyl chloride)	150 U
cis-1,2-Dichloroethene	140 U
cis-1,3-Dichloropropene	160 U
Dibromochloromethane	300 U
Dichlorodifluoromethane (CFC-12)	170 U
Ethylbenzene	77 J
Isopropyl alcohol (TIC)	210 J
Methylene chloride	120 U
Styrene	150 U
Tetrachloroethene	240 U
Toluene	130 U
trans-1,2-Dichloroethene	140 U
trans-1,3-Dichloropropene	160 U
Trichloroethene	190 U
Trichlorofluoromethane (CFC-11)	200 U
Trifluorotrichloroethane (Freon 113)	270 U
Vinyl chloride	45 U
Xylenes (total)	460

CRA-811GP	4/30/2012 ug/m3
VOCs	
1,1,1-Trichloroethane	1.6 U/1.6 U
1,1,2-Trichloroethane	2.2 U/2.2 U
1,1-Dichloroethane	1.9/1.7
1,1-Dichloroethene	3.2 U/3.2 U
1,2,4-Trichlorobenzene	19 U/19 U
1,2-Dibromoethane (Ethylene dibromide)	6.1 U/6.1 U
1,2-Dichlorobenzene	2.4 U/2.4 U
1,2-Dichloroethane	3.2 U/3.2 U
1,2-Dichloropropane	1.8 U/1.8 U
1,3-Dichlorobenzene	2.4 U/2.4 U
1,4-Dichlorobenzene	2.4 U/2.4 U
2-Butanone (Methyl ethyl ketone) (MEK)	14/18
2-Hexanone	1.3 J/2.1
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	1.6 U/1.6 U
Acetone	93/110
Benzene	4.4/3.8
Bromodichloromethane	2.0 U/2.0 U
Bromoform	4.1 U/4.1 U
Bromomethane (Methyl bromide)	3.1 U/3.1 U
Carbon disulfide	4.6/4.3
Carbon tetrachloride	5.0 U/5.0 U
Chlorobenzene	1.4 U/1.4 U
Chloroethane	2.1 U/2.1 U
Chloroform (Trichloromethane)	0.81 J/1.1 J
Chloromethane (Methyl chloride)	1.7 U/0.63 J
cis-1,2-Dichloroethene	1.2 J/1.1 J
cis-1,3-Dichloropropene	1.8 U/1.8 U
Dibromochloromethane	3.4 U/3.4 U
Dichlorodifluoromethane (CFC-12)	3.4 J/2.0
Ethylbenzene	8.6/8.1
Isopropyl alcohol (TIC)	980 J/1000 J
Methylene chloride	1.4 U/3.0
Styrene	1.7 U/1.7 U
Tetrachloroethene	4.2/3.9
Toluene	22/18
trans-1,2-Dichloroethene	1.6 U/1.6 U
trans-1,3-Dichloropropene	1.8 U/1.8 U
Trichloroethene	2.7/2.4
Trichlorofluoromethane (CFC-11)	2.2 U/2.2 U
Trifluorotrichloroethane (Freon 113)	3.1 U/3.1 U
Vinyl chloride	0.32 J/0.51 U
Xylenes (total)	29/26

CRA-812GP	4/8/2013 ug/m3
VOCs	
1,1,1-Trichloroethane	8.0 U/7.7 U
1,1,2-Trichloroethane	11 U/10 U
1,1-Dichloroethane	5.9 U/5.7 U
1,1-Dichloroethene	16 U/15 U
1,2,4-Trichlorobenzene	91 U/88 U
1,2-Dibromoethane (Ethylene dibromide)	30 U/29 U
1,2-Dichlorobenzene	12 U/11 U
1,2-Dichloroethane	16 U/15 U
1,2-Dichloropropane	9.1 U/8.7 U
1,3-Dichlorobenzene	12 U/11 U
1,4-Dichlorobenzene	12 U/11 U
2-Butanone (Methyl ethyl ketone) (MEK)	14/18
2-Hexanone	16 U/16 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	8.0 U/7.7 U
Acetone	17/16
Benzene	6.3 U/6.0 U
Bromodichloromethane	9.8 U/9.5 U
Bromoform	41 U/39 U
Bromomethane (Methyl bromide)	15 U/15 U
Carbon disulfide	5.0 J/12 U
Carbon tetrachloride	25 U/24 U
Chlorobenzene	6.8 U/6.5 U
Chloroethane	19 U/19 U
Chloroform (Trichloromethane)	7.2 U/6.9 U
Chloromethane (Methyl chloride)	8.1 U/7.8 U
cis-1,2-Dichloroethene	7.8 U/7.5 U
cis-1,3-Dichloropropene	8.9 U/8.6 U
Dibromochloromethane	17 U/16 U
Dichlorodifluoromethane (CFC-12)	9.7 U/9.4 U
Ethylbenzene	8.5 U/8.2 U
Isopropyl alcohol (TIC)	61/2600
Methylene chloride	6.8 U/6.6 U
Styrene	8.3 U/8.1 U
Tetrachloroethene	13 U/13 U
Toluene	7.4 U/7.1 U
trans-1,2-Dichloroethene	7.8 U/7.5 U
trans-1,3-Dichloropropene	8.9 U/8.6 U
Trichloroethene	11 U/11 U
Trichlorofluoromethane (CFC-11)	11 U/11 U
Trifluorotrichloroethane (Freon 113)	15 U/14 U
Vinyl chloride	5.0 U/4.8 U
Xylenes (total)	8.5 U/8.2 U

CRA-816GP	5/2/2012 ug/m3
VOCs	
1,1,1-Trichloroethane	1.6 U
1,1,2-Trichloroethane	2.2 U
1,1-Dichloroethane	1.2 U
1,1-Dichloroethene	3.2 U
1,2,4-Trichlorobenzene	19 U
1,2-Dibromoethane (Ethylene dibromide)	6.1 U
1,2-Dichlorobenzene	2.4 U
1,2-Dichloroethane	3.2 U
1,2-Dichloropropane	1.8 U
1,3-Dichlorobenzene	2.4 U
1,4-Dichlorobenzene	2.4 U
2-Butanone (Methyl ethyl ketone) (MEK)	3.7
2-Hexanone	1.6 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	1.6 U
Acetone	23
Benzene	7.8
Bromodichloromethane	2.0 U
Bromoform	4.1 U
Bromomethane (Methyl bromide)	3.1 U
Carbon disulfide	2.5 U
Carbon tetrachloride	5.0 U
Chlorobenzene	0.67 J
Chloroethane	2.1 U
Chloroform (Trichloromethane)	1.3 J
Chloromethane (Methyl chloride)	1.7 U
cis-1,2-Dichloroethene	3.5
cis-1,3-Dichloropropene	1.8 U
Dibromochloromethane	3.4 U
Dichlorodifluoromethane (CFC-12)	1.3 J
Ethylbenzene	8.0
Isopropyl alcohol (TIC)	3.4 J
Methylene chloride	0.78 J
Styrene	1.7 U
Tetrachloroethene	16
Toluene	9.6
trans-1,2-Dichloroethene	1.6 U
trans-1,3-Dichloropropene	1.8 U
Trichloroethene	25
Trichlorofluoromethane (CFC-11)	2.2 U
Trifluorotrichloroethane (Freon 113)	3.1 U
Vinyl chloride	0.65 J
Xylenes (total)	17 J

CRA-817GP	5/2/2012 ug/m3
VOCs	
1,1,1-Trichloroethane	76 U
1,1,2-Trichloroethane	100 U
1,1-Dichloroethane	57 U
1,1-Dichloroethene	150 U
1,2,4-Trichlorobenzene	860 U
1,2-Dibromoethane (Ethylene dibromide)	290 U
1,2-Dichlorobenzene	110 U
1,2-Dichloroethane	150 U
1,2-Dichloropropane	86 U
1,3-Dichlorobenzene	110 U
1,4-Dichlorobenzene	110 U
2-Butanone (Methyl ethyl ketone) (MEK)	240
2-Hexanone	76 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	76 U
Acetone	89 U
Benzene	45 U
Bromodichloromethane	94 U
Bromoform	190 U
Bromomethane (Methyl bromide)	140 U
Carbon disulfide	120 U
Carbon tetrachloride	230 U
Chlorobenzene	64 U
Chloroethane	98 U
Chloroform (Trichloromethane)	68 U
Chloromethane (Methyl chloride)	77 U
cis-1,2-Dichloroethene	74 U
cis-1,3-Dichloropropene	85 U
Dibromochloromethane	160 U
Dichlorodifluoromethane (CFC-12)	92 U
Ethylbenzene	81 U
Isopropyl alcohol (TIC)	65 U
Methylene chloride	79 U
Styrene	130 U
Tetrachloroethene	74 U
Toluene	70 U
trans-1,2-Dichloroethene	74 U
trans-1,3-Dichloropropene	85 U
Trichloroethene	100 U
Trichlorofluoromethane (CFC-11)	100 U
Trifluorotrichloroethane (Freon 113)	140 U
Vinyl chloride	24 U
Xylenes (total)	81 U

CRA-818GP	5/2/2012 ug/m3
VOCs	
1,1,1-Trichloroethane	25
1,1,2-Trichloroethane	22 U
1,1-Dichloroethane	56000
1,1-Dichloroethene	160
1,2,4-Trichlorobenzene	190 U
1,2-Dibromoethane (Ethylene dibromide)	61 U
1,2-Dichlorobenzene	24 U
1,2-Dichloroethane	32 U
1,2-Dichloropropane	18 U
1,3-Dichlorobenzene	24 U
1,4-Dichlorobenzene	24 U
2-Butanone (Methyl ethyl ketone) (MEK)	24 U
2-Hexanone	16 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	17
Acetone	28
Benzene	9.1 J
Bromodichloromethane	20 U
Bromoform	41 U
Bromomethane (Methyl bromide)	31 U
Carbon disulfide	6.4 J
Carbon tetrachloride	50 U
Chlorobenzene	14 U
Chloroethane	380
Chloroform (Trichloromethane)	15 U
Chloromethane (Methyl chloride)	17 U
cis-1,2-Dichloroethene	16 U
cis-1,3-Dichloropropene	18 U
Dibromochloromethane	21 U
Dichlorodifluoromethane (CFC-12)	12 J
Ethylbenzene	6400
Isopropyl alcohol (TIC)	5.1 U
Methylene chloride	9.2 J
Styrene	14 U
Tetrachloroethene	27
Toluene	39
trans-1,2-Dichloroethene	16 U
trans-1,3-Dichloropropene	18 U
Trichloroethene	2.2 J
Trichlorofluoromethane (CFC-11)	22 U
Trifluorotrichloroethane (Freon 113)	31 U
Vinyl chloride	5.1 U
Xylenes (total)	2.3 J

CRA-819GP	5/2/2012 ug/m3
VOCs	
1,1,1-Trichloroethane	76 U
1,1,2-Trichloroethane	100 U
1,1-Dichloroethane	57 U
1,1-Dichloroethene	150 U
1,2,4-Trichlorobenzene	860 U
1,2-Dibromoethane (Ethylene dibromide)	290 U
1,2-Dichlorobenzene	110 U
1,2-Dichloroethane	150 U
1,2-Dichloropropane	86 U
1,3-Dichlorobenzene	110 U
1,4-Dichlorobenzene	110 U
2-Butanone (Methyl ethyl ketone) (MEK)	240
2-Hexanone	76 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	76 U
Acetone	89 U
Benzene	45 U
Bromodichloromethane	94 U
Bromoform	190 U
Bromomethane (Methyl bromide)	140 U
Carbon disulfide	120 U
Carbon tetrachloride	230 U
Chlorobenzene	64 U
Chloroethane	98 U
Chloroform (Trichloromethane)	68 U
Chloromethane (Methyl chloride)	77 U
cis-1,2-Dichloroethene	74 U
cis-1,3-Dichloropropene	85 U
Dibromochloromethane	160 U
Dichlorodifluoromethane (CFC-12)	92 U
Ethylbenzene	81 U
Isopropyl alcohol (TIC)	110 U
Methylene chloride	65 U
Styrene	79 U
Tetrachloroethene	130 U
Toluene	70 U
trans-1,2-Dichloroethene	74 U
trans-1,3-Dichloropropene	85 U
Trichloroethene	100 U
Trichlorofluoromethane (CFC-11)	100 U
Trifluorotrichloroethane (Freon 113)	140 U
Vinyl chloride	24 U
Xylenes (total)	81 U

CRA-820GP	5/3/2012 ug/m3
VOCs	
1,1,1-Trichloroethane	1.6 U
1,1,2-Trichloroethane	2.2 U
1,1-Dichloroethane	1.2 U
1,1-Dichloroethene	3.2 U
1,2,4-Trichlorobenzene	19 U
1,2-Dibromoethane (Ethylene dibromide)	6.1 U
1,2-Dichlorobenzene	2.4 U
1,2-Dichloroethane	3.2 U
1,2-Dichloropropane	1.8 U
1,3-Dichlorobenzene	2.4 U
1,4-Dichlorobenzene	2.4 U
2-Butanone (Methyl ethyl ketone) (MEK)	4.2
2-Hexanone	3.3 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	1.2 J
Acetone	24
Benzene	3.3 U
Bromodichloromethane	2.0 U
Bromoform	8.3 U
Bromomethane (Methyl bromide)	3.1 U
Carbon disulfide	2.4 J
Carbon tetrachloride	5.0 U
Chlorobenzene	1.4 U
Chloroethane	4.0 U
Chloroform (Trichloromethane)	1.5 U
Chloromethane (Methyl chloride)	1.7 U
cis-1,2-Dichloroethene	1.6 U
cis-1,3-Dichloropropene	1.8 U
Dibromochloromethane	3.4 U
Dichlorodifluoromethane (CFC-12)	2.0
Ethylbenzene	3.4
Isopropyl alcohol (TIC)	23
Methylene chloride	1.4 U
Styrene	1.7 U
Tetrachloroethene	27
Toluene	1.7
trans-1,2-Dichloroethene	1.6 U
trans-1,3-Dichloropropene	1.8 U
Trichloroethene	2.1 J
Trichlorofluoromethane (CFC-11)	0.88 J
Trifluorotrichloroethane (Freon 113)	3.1 U
Vinyl chloride	0.65 J
Xylenes (total)	1.7 J

CRA-821GP	5/2/2012 ug/m3
VOCs	
1,1,1-Trichloroethane	1.6 U
1,1,2-Trichloroethane	2.2 U
1,1-Dichloroethane	1.2 U
1,1-Dichloroethene	3.2 U
1,2,4-Trichlorobenzene	19 U
1,2-Dibromoethane (Ethylene dibromide)	6.1 U
1,2-Dichlorobenzene	2.4 U
1,2-Dichloroethane	3.2 U
1,2-Dichloropropane	1.8 U
1,3-Dichlorobenzene	2.4 U
1,4-Dichlorobenzene	2.4 U
2-Butanone (Methyl ethyl ketone) (MEK)	1.6 U
2-Hexanone	1.6 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	1.6 U
Acetone	5.1
Benzene	0.96 U
Bromodichloromethane	2.0 U
Bromoform	4.1 U
Bromomethane (Methyl bromide)	3.1 U
Carbon disulfide	2.5 U
Carbon tetrachloride	5.0 U
Chlorobenzene	1.4 U
Chloroethane	2.1 U
Chloroform (Trichloromethane)	1.5 U
Chloromethane (Methyl chloride)	1.7 U
cis-1,2-Dichloroethene	1.6 U
cis-1,3-Dichloropropene	1.8 U
Dibromochloromethane	3.4 U
Dichlorodifluoromethane (CFC-12)	1.5 J
Ethylbenzene	1.7 U
Isopropyl alcohol (TIC)	6.0 J
Methylene chloride	1.4 U
Styrene	1.7 U
Tetrachloroethene	9.4
Toluene	2.5
trans-1,2-Dichloroethene	1.6 U
trans-1,3-Dichloropropene	1.8 U
Trichloroethene	2.1 U
Trichlorofluoromethane (CFC-11)	1.1 J
Trifluorotrichloroethane (Freon 113)	3.1 U
Vinyl chloride	0.51 U
Xylenes (total)	1.5 J

CRA-822GP	5/2/2012 ug/m3
VOCs	
1,1,1-Trichloroethane	1.6 U
1,1,2-Trichloroethane	2.2 U
1,1-Dichloroethane	1.2 U
1,1-Dichloroethene	3.2 U
1,2,4-Trichlorobenzene	19 U
1,2-Dibromoethane (Ethylene dibromide)	6.1 U
1,2-Dichlorobenzene	2.4 U
1,2-Dichloroethane	3.2 U
1,2-Dichloropropane	1.8 U
1,3-Dichlorobenzene	2.4 U
1,4-Dichlorobenzene	2.4 U
2-Butanone (Methyl ethyl ketone) (MEK)	6.4
2-Hexanone	1.6 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	1.6 U
Acetone	57
Benzene	0.96 J
Bromodichloromethane	2.0 U
Bromoform	4.1 U
Bromomethane (Methyl bromide)	3.1 U
Carbon disulfide	1.4 J
Carbon tetrachloride	5.0 U
Chlorobenzene	1.4 U
Chloroethane	2.1 U
Chloroform (Trichloromethane)	1.5 U
Chloromethane (Methyl chloride)	1.8 U
cis-1,2-Dichloroethene	1.6 U
cis-1,3-Dichloropropene	1.8 U
Dibromochloromethane	3.4 U
Dichlorodifluoromethane (CFC-12)	2.1
Ethylbenzene	1.7 U
Isopropyl alcohol (TIC)	9.2 J
Methylene chloride	1.4 U
Styrene	1.7 U
Tetrachloroethene	1.5
Toluene	1.6 U
trans-1,2-Dichloroethene	1.8 U
trans-1,3-Dichloropropene	2.1 U
Trichloroethene	1.0 J
Trifluorotrichloroethane (CFC-11)	3.1 U
Vinyl chloride	0.51 U
Xylenes (total)	1.7 J

CRA-823GP	5/2/2012 ug/m3
VOCs	
1,1,1-Trichloroethane	140 U
1,1,2-Trichloroethane	190 U
1,1-Dichloroethane	1500
1,1-Dichloroethene	270 U
1,2,4-Trichlorobenzene	1600 U
1,2-Dibromoethane (Ethylene dibromide)	520 U
1,2-Dichlorobenzene	200 U
1,2-Dichloroethane	270 U
1,2-Dichloropropane	160 U
1,3-Dichlorobenzene	200 U
1,4-Dichlorobenzene	200 U
2-Butanone (Methyl ethyl ketone) (MEK)	200 U
2-Hexanone	140 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	140 U
Acetone	160 U
Benzene	81 U
Bromodichloromethane	170 U
Bromoform	350 U
Bromomethane (Methyl bromide)	260 U
Carbon disulfide	210 U
Carbon tetrachloride	420 U
Chlorobenzene	120 U
Chloroethane	8900
Chloroform (Trichloromethane)	120 U
Chloromethane (Methyl chloride)	140 U
cis-1,2-Dichloroethene	130 U
cis-1,3-Dichloropropene	150 U
Dibromochloromethane	290 U
Dichlorodifluoromethane (CFC-12)	170 U
Ethylbenzene	3900
Isopropyl alcohol (TIC)	210 U
Methylene chloride	120 U
Styrene	140 U
Tetrachloroethene	230 U
Toluene	130 U
trans-1,2-Dichloroethene	130 U
trans-1,3-Dichloropropene	150 U
Trichloroethene	180 U
Trichlorofluoromethane (CFC-11)	190 U
Trifluorotrichloroethane (Freon 113)	260 U
Vinyl chloride	200
Xylenes (total)	150 U

CRA-824GP	5/1/2012 ug/m3
VOCs	
1,1,1-Trichloroethane	88 U
1,1,2-Trichloroethane	120 U
1,1-Dichloroethane	65 U
1,1-Dichloroethene	170 U
1,2,4-Trichlorobenzene	990 U
1,2-Dibromoethane (Ethylene dibromide)	330 U
1,2-Dichlorobenzene	130 U
1,2-Dichloroethane	170 U
1,2-Dichloropropane	99 U
1,3-Dichlorobenzene	130 U
1,4-Dichlorobenzene	130 U
2-Butanone (Methyl ethyl ketone) (MEK)	130 U
2-Hexanone	88 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	88 U
Acetone	120
Benzene	51 U
Bromodichloromethane	110 U
Bromoform	220 U
Bromomethane (Methyl bromide)	170 U
Carbon disulfide	130 U
Carbon tetrachloride	270 U
Chlorobenzene	74 U
Chloroethane	110 U
Chloroform (Trichloromethane)	78 U
Chloromethane (Methyl chloride)	88 U
cis-1,2-Dichloroethene	85 U
cis-1,3-Dichloropropene	97 U
Dibromochloromethane	180 U
Dichlorodifluoromethane (CFC-12)	110 U
Ethylbenzene	1400 J
Isopropyl alcohol (TIC)	74 U
Methylene chloride	91 U
Styrene	150 U
Tetrachloroethene	52 J
Toluene	85 U
trans-1,2-Dichloroethene	85 U
trans-1,3-Dichloropropene	97 U
Trichloroethene	110 U
Trichlorofluoromethane (CFC-11)	120 U
Trifluorotrichloroethane (Freon 113)	160 U
Vinyl chloride	27 U
Xylenes (total)	12000

CRA-825GP	5/3/2012 ug/m3
VOCs	
1,1,1-Trichloroethane	1.6 U
1,1,2-Trichloroethane	2.2 U
1,1-Dichloroethane	1.2 U
1,1-Dichloroethene	3.2 U
1,2,4-Trichlorobenzene	19 U
1,2-Dibromoethane (Ethylene dibromide)	6.1 U
1,2-Dichlorobenzene	2.4 U
1,2-Dichloroethane	3.2 U
1,2-Dichloropropane	1.8 U
1,3-Dichlorobenzene	2.4 U
1,4-Dichlorobenzene	2.4 U
2-Butanone (Methyl ethyl ketone) (MEK)	10 J
2-Hexanone	1.6 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	1.6 U
Acetone	76 J
Benzene	2.7 J
Bromodichloromethane	2.0 U
Bromoform	4.1 U
Bromomethane (Methyl bromide)	3.1 U
Carbon disulfide	100 J
Carbon tetrachloride	5.0 U
Chlorobenzene	1.4 U
Chloroethane	2.1 U
Chloroform (Trichloromethane)	1.5 U
Chloromethane (Methyl chloride)	1.7 U
cis-1,2-Dichloroethene	1.6 U
cis-1,3-Dichloropropene	1.8 U
Dibromochloromethane	3.4 U
Dichlorodifluoromethane (CFC-12)	5.6 J
Ethylbenzene	10 J
Isopropyl alcohol (TIC)	1.4 U
Methylene chloride	1.7 U
Styrene	3.5 J
Tetrachloroethene	13 J
Toluene	1.6 U
trans-1,2-Dichloroethene	1.8 U
trans-1,3-Dichloropropene	2.1 U
Trichloroethene	1.0 J
Trichlorofluoromethane (CFC-11)	2.2 U
Trifluorotrichloroethane (Freon 113)	3.1 U
Vinyl chloride	0.51 U
Xylenes (total)	14 J

CRA-826GP	5/2/2012 ug/m3
VOCs	
1,1,1-Trichloroethane	1.6 U
1,1,2-Trichloroethane	2.2 U
1,1-Dichloroethane	1.2 U
1,1-Dichloroethene	3.2 U
1,2,4-Trichlorobenzene	19 U
1,2-Dibromoethane (Ethylene dibromide)	6.1 U
1,2-Dichlorobenzene	2.4 U
1,2-Dichloroethane	3.2 U
1,2-Dichloropropane	1.8 U
1,3-Dichlorobenzene	2.4 U
1,4-Dichlorobenzene	2.4 U
2-Butanone (Methyl ethyl ketone) (MEK)	1.6 U
2-Hexanone	1.6 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	1.6 U
Acetone	5.8
Benzene	0.96 U
Bromodichloromethane	2.0 U
Bromoform	4.1 U
Bromomethane (Methyl bromide)	3.1 U
Carbon disulfide	2.5 U
Carbon tetrachloride	5.0 U
Chlorobenzene	1.4 U
Chloroethane	2.1 U
Chloroform (Trichloromethane)	1.5 U
Chloromethane (Methyl chloride)	1.7 U
cis-1,2-Dichloroethene	1.6 U
cis-1,3-Dichloropropene	1.8 U
Dibromochloromethane	3.4 U
Dichlorodifluoromethane (CFC-12)	1.5 J
Ethylbenzene	1.7 U
Isopropyl alcohol (TIC)	7.8 J
Methylene chloride	1.4 U
Styrene	1.7 U
Tetrachloroethene	5.6
Toluene	1.5 U
trans-1,2-Dichloroethene	1.6 U
trans-1,3-Dichloropropene	1.8 U
Trichloroethene	2.1 U
Trichlorofluoromethane (CFC-11)	2.2 U
Trifluorotrichloroethane (Freon 113)	3.1 U
Vinyl chloride	0.51 U
Xylenes (total)	1.7 U

CRA-809GP	4/30/2012 ug/m3
VOCs	
1,1,1-Trichloroethane	7.9 U
1,1,2-Trichloroethane	11 U
1,1-Dichloroethane	5.9 U
1,1-Dichloroethene	15 U
1,2,4-Trichlorobenzene	90 U
1,2-Dibromoethane (Ethylene dibromide)	30 U
1,2-Dichlorobenzene	12 U
1,2-Dichloroethane	16 U
1,2-Dichloropropane	9.0 U
1,3-Dichlorobenzene	12 U
1,4-Dichlorobenzene	12 U
2-Butanone (Methyl ethyl ketone) (MEK)	150
2-Hexanone	5.5 J
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	9.9
Acetone	540
Benzene	36
Bromodichloromethane	9.7 U
Bromoform	20 U
Bromomethane (Methyl bromide)	15 U
Carbon disulfide	42
Carbon tetrachloride	24 U
Chlorobenzene	6.7 U
Chloroethane	10 U
Chloroform (Trichloromethane)	7.1 U
Chloromethane (Methyl chloride)	8.0 U
cis-1,2-Dichloroethene	15
cis-1,3-Dichloropropene	8.8 U
Dibromochloromethane	17 U
Dichlorodifluoromethane (CFC-12)	9.6 U
Ethylbenzene	18
Isopropyl alcohol (TIC)	7.9 J
Methylene chloride	6.7 U
Styrene	8.3 U
Tetrachloroethene	13 U
Toluene	58
trans-1,2-Dichloroethene	49
trans-1,3-Dichloropropene	8.8 U
Trichloroethene	60
Trichlorofluoromethane (CFC-11)	11 U
Trifluorotrichloroethane (Freon 113)	15 U
Vinyl chloride	93
Xylenes (total)	47

CRA-815GP	5/2/2012 ug/m3
VOCs	
1,1,1-Trichloroethane	1.6 U
1,1,2-Trichloroethane	2.2 U
1,1-Dichloroethane	1.3
1,1-Dichloroethene	3.2 U
1,2,4-Trichlorobenzene	19 U
1,2-Dibromoethane (Ethylene dibromide)	6.1 U
1,2-Dichlorobenzene	2.4 U
1,2-Dichloroethane	3.2 U
1,2-Dichloropropane	1.8 U
1,3-Dichlorobenzene	2.4 U
1,4-Dichlorobenzene	2.4 U
2-Butanone (Methyl ethyl ketone) (MEK)	3.7
2-Hexanone	1.6 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	1.6 U
Acetone	42
Benzene	7.3
Bromodichloromethane	2.0 U
Bromoform	4.1 U
Bromomethane (Methyl bromide)	3.1 U
Carbon disulfide	2.5 U
Carbon tetrachloride	5.0 U
Chlorobenzene	1.4 U
Chloroethane	2.1 U
Chloroform (Trichloromethane)	1.9
Chloromethane (Methyl chloride)	1.7 U
cis-1,2-Dichloroethene	4.5
cis-1,3-Dichloropropene	1.8 U
Dibromochloromethane	3.4 U
Dichlorodifluoromethane (CFC-12)	1.4 J
Ethylbenzene	18
Isopropyl alcohol (TIC)	12 J
Methylene chloride	1.4 U
Styrene	1.7 U
Tetrachloroethene	9.6
Toluene	49
trans-1,2-Dichloroethene	1.6 U
trans-1,3-Dichloropropene	1.8 U
Trichloroethene	6.5
Trichlorofluoromethane (CFC-11)	2.2 U
Trifluorotrichloroethane (Freon 113)	7.8
Vinyl chloride	0.38 J
Xylenes (total)	76

CRA-814GP	5/1/2012 ug/m3
VOCs	
1,1,1-Trichloroethane	8.1
1,1,2-Trichloroethane	2.2 U
1,1-Dichloroethane	1.2 U
1,1-Dichloroethene	3.2 U
1,2,4-Trichlorobenzene	19 U
1,2-Dibromoethane (Ethylene dibromide)	6.1 U
1,2-Dichlorobenzene	2.4 U
1,2-Dichloroethane	3.2 U
1,2-Dichloropropane	1.8 U
1,3-Dichlorobenzene	2.4 U
1,4-Dichlorobenzene	2.4 U
2-Butanone (Methyl ethyl ketone) (MEK)	2.4 U
2-Hexanone	1.6 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	1.6 U
Acetone	0.96 U
Benzene	3.3 U
Bromodichloromethane	2.0 U
Bromoform	4.1 U
Bromomethane (Methyl bromide)	3.1 U
Carbon disulfide	2.5 U
Carbon tetrachloride	5.0 U
Chlorobenzene	1.4 U
Chloroethane	2.1 U
Chloroform (Trichloromethane)	10
Chloromethane (Methyl chloride)	1.7 U
cis-1,2-Dichloroethene	1.6 U
cis-1,3-Dichloropropene	1.8 U
Dibromochloromethane	3.4 U
Dichlorodifluoromethane (CFC-12)	9.6
Ethylbenzene	1.7 U
Isopropyl alcohol (TIC)	1.3 J
Methylene chloride	1.4 U
Styrene	1.7 U
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TABLES

TABLE 2.1

WORK PLAN EXCEPTIONS
2013 RFI REPORT
FORMER GENERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Boring/Well Number	Reason for Change
Location Exceptions	
CRA-702I	No intermediate water bearing zone found.
CRA-702SB[1]	Attempted CRA-702I.
CRA-704SB[1]	Attempted CRA-704I.
CRA-714M[2]	Not required for delineation.
CRA-715M[2]	Not required for delineation.
CRA-716M[2]	Not required for delineation.
CRA-717I[1]	Unable to install CRA-792I and CRA-797I
CRA-717M[2]	Not required for delineation.
CRA-718M[2]	Not required for delineation.
CRA-719M[2]	Not required for delineation.
CRA-723M	Too many utilities for safe clearance.
CRA-726SB[1]	First attempt at CRA-726M.
CRA-728M	No shallow water bearing zone found.
CRA-728SB[1]	Attempted CRA-728M
CRA-730I	Subsurface refusal
CRA-730M	No shallow water bearing zone found.
CRA-730SB[1]	Attempted CRA-730M
CRA-731M	No shallow water bearing zone found.
CRA-732M	No shallow water bearing zone found.
CRA-732SB[1]	Attempted CRA-732M.
CRA-733I	Insufficient overhead clearance
CRA-733M	Insufficient overhead clearance
CRA-734I	Insufficient overhead clearance
CRA-734M	Insufficient overhead clearance
CRA-737I	No intermediate water bearing zone found.
CRA-738I	Subsurface refusal
CRA-738M	Subsurface refusal
CRA-739M	No shallow water bearing zone found.
CRA-746SB	Too many utilities for safe clearance.
CRA-754M	Too many utilities for safe clearance.
CRA-761SB	Too many utilities for safe clearance. Not required for delineation.
CRA-776M	Subsurface refusal
CRA-777M	Subsurface refusal
CRA-778M	Postponed until property transaction finalized.
CRA-779M	Postponed until property transaction finalized.
CRA-780M	Postponed until property transaction finalized.
CRA-781M	Postponed until property transaction finalized.
CRA-782M	Postponed until property transaction finalized.
CRA-783M	Postponed until property transaction finalized.
CRA-784I[1]	Additional intermediate zone delineation
CRA-787M	No shallow water bearing zone found.
CRA-788I	Refusal at ground surface
CRA-788M	Refusal at ground surface

TABLE 2.1

WORK PLAN EXCEPTIONS
2013 RFI REPORT
FORMER GENERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Boring/Well Number	Reason for Change
CRA-789I	Insufficient overhead clearance
CRA-792I	Insufficient overhead clearance
CRA-794SB	Subsurface refusal
CRA-797I	Subsurface refusal
CRA-797M	Subsurface refusal
CRA-804I[1]	Additional intermediate zone delineation
CRA-834M[1]	Additional GW delineation. Historical adjacent well damaged.
CRA-836SB[1]	Additional intermediate zone delineation
CRA-837I	No intermediate water bearing zone found.
CRA-837ML	Attempted CRA-837I. Delineation for deep shallow zone.
Sampling Exceptions	
CRA-741M	Added to groundwater sampling event to gather second round of data.
CRA-774SB	Only one soil sample collected due to shallow water table.
CRA-775M	Additional soil sample collected due to odor. No groundwater sample collected, product in well.
CRA-789M	Added to groundwater sampling event to gather second round of data.

Notes:
M - monitoring well installed to screen shallow zone
ML - monitoring well installed to screen lower portion of shallow zone
I - monitoring well installed to screen intermediate zone
D - monitoring well installed to screen deep zone
SB - soil boring

[1] Location not proposed in RFI Work Plans. Added in field

[2] RFI Work Plans proposed well to be installed and sampled if additional delineation is needed based on results from CRA-790M, CRA-792M, CRA-793SB, CRA-794SB, CRA-795M,
CRA-796SB and CRA-799M

TABLE 3.1

RECALCULATED GSI CRITERIA
2013 RFI REPORT
FORMER GENERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Calculation of Generic Facility-Specific Part 201 Groundwater Surface Water Interface (GSI) Criteria for {G} Footnoted Hazardous Substances

Directions for calculating generic facility-specific GSI criteria:

1. Enter "**hardness**" (Column C) or "**pH**" (Column D). Click the green check mark to the left of the Excel formula bar or press the "Enter" key.
2. The GSI criteria for surface water **not** protected as a source of drinking water are the lower of the final chronic value (FCV), wildlife value (WV), and the surface water human non-drinking water value (HNDV). These criteria are presented in Column L.
3. The GSI criteria for surface water protected as a source of drinking water are the lower of the FCV, WV, and surface water human drinking water value (HDV). Surface water protected as a source of drinking water includes the Great Lakes and their connecting waters, and inland surface water in close proximity to a water supply intake. These criteria are presented in Column M. Refer to Part 201 Criteria Application Guidesheet #3 for further guidance on selecting the applicable GSI criterion.
4. The final acute values (FAV) protective of aquatic life are presented in column E. The calculation of the FAV is provided to allow the identification of any exceedance of an acute GSI criterion. Where an exceedance of an acute GSI criterion exists, an evaluation must be done to determine appropriate action in accordance with provisions of R 299.5716, R 299.5526(4) and RRD Operational Memorandum No. 5.

Calculate GSI in ug/L (ppb)

Hazardous Substance	Chemical Abstract Service Number (CAS #)	* ENTER Hardness in mg CaCO3/L	* ENTER pH	Final Acute Value (FAV)	FAV Conversion Factor	Final Chronic Value (FCV)	FCV Conversion Factor	Wildlife Value (WV)	Surface Water Human Non-Drinking Water Value (HNDV)	Surface Water Human Drinking Water Value (HDV)	GSI Criteria for Surface Water Not Protected for Drinking Water Use	GSI Criteria for Surface Water Protected for Drinking Water Use
Acetate	71501	NA	**7.25**	148330.7713	NA	8.2E+3	NA	NA	1.3E+6	16,000	8.2E+3	8.2E+3
Acetic acid	64197	NA	**7.25**	148330.7713	NA	8.2E+3	NA	NA	1.3E+6	16,000	8.2E+3	8.2E+3
Barium	7440393	**391.25**	NA	10650.03707	NA	1.9E+3	NA	NA	1.6E+5	1,900	1.9E+3	1.9E+3
Beryllium	7440417	**391.25**	NA	1354.803398	NA	7.5E+1	NA	NA	1,200	160	7.5E+1	7.5E+1
Cadmium	7440439	**391.25**	NA	37.33247712	0.886914532	6.1E+0	0.851914532	NA	130	3	6.1E+0	2.5E+0
Chromium (III)	16065831	**391.25**	NA	3482.929736	NA	2.3E+2	0.86	NA	9,400	120	2.3E+2	1.2E+2
Copper	7440508	**391.25**	NA	97.18765393	NA	2.9E+1	0.96	NA	38,000	470	2.9E+1	2.9E+1
Lead	7439921	**391.25**	NA	1146.967612	0.592236486	6.0E+1	0.592236486	NA	190	14	6.0E+1	1.4E+1
Manganese	7439965	**391.25**	NA	28115.44021	NA	6.5E+3	NA	NA	59,000	1,300	6.5E+3	1.3E+3
Nickel	7440020	**391.25**	NA	2969.689027	NA	1.6E+2	0.997	NA	2.1E+5	2,600	1.6E+2	1.6E+2
Zinc	7440666	**391.25**	NA	744.5120713	NA	3.8E+2	0.986	NA	16,000	3,300	3.8E+2	3.8E+2
Pentachlorophenol	87865	NA	**7.25**	22.42995137	NA	8.6E+0	NA	NA	2.8	1.8	2.8E+0	1.8E+0

NA = Criterion or value is not available or not applicable.
* The formulas in this spreadsheet depend upon appropriate entries in these cells. Do not leave these cells blank. If numeric hardness or pH values are not available, enter the word "hardness" or "pH" in the appropriate cell.

NOTE
In comparison to SS criteria in Site Summary Report: the only constituents which values changed are lead and manganese.
For GSI Criteria - the values went up for both.
For GSI PC - the value for lead went up and the value for manganese stayed the same.

Calculation of Generic Facility-Specific Part 201 Soil GSI Protection Criteria (GSI PC)

Directions for calculating a generic facility-specific soil GSI PC:

1. Manually type in the "**GSI**" criterion calculated on the previous page, rounded to 2 significant figures. DO NOT CUT AND PASTE as this will enter the unrounded value and generate a different value. Click the green check mark to the left of the Excel formula bar or press the "Enter" key.
2. The GSI PC will calculate and appear in Column W. The GSI PC are the higher of the Soil-Water Partition Value for GSI (Column U) and the 20 X GSI value (Column V).

Calculate Soil GSI PC in ug/Kg (ppb)

Hazardous Substance	Chemical Abstract Service Number (CAS #)	* ENTER GSI	Soil-Water Distribution Coefficients (Kd) L/Kg	Henry's Law Constant (HLC) atm-m3/mol	Soil Organic Carbon-Water Partition Coefficient (Koc) L/Kg	Soil-Water Partition Value for GSI ug/Kg	20 X GSI ug/Kg	Soil GSI PC ug/Kg
Acetate	71501	**8200**	NA	NA	NA	NA	1.6E+5	1.6E+5
Acetic acid	64197	**8200**	NA	NA	NA	NA	1.6E+5	1.6E+5
Barium	7440393	**1900**	41	NA	NA	1.2E+6	3.8E+4	1.2E+6
Beryllium	7440417	**75**	790	NA	NA	9.5E+5	1.5E+3	9.5E+5
Cadmium	7440439	**6.1**	75	NA	NA	7.3E+3	1.2E+2	7.3E+3
Chromium (III)	16065831	**230**	1.8E+6	NA	NA	6.6E+9	4.6E+3	6.6E+9
Copper	7440508	**29**	360	NA	NA	1.7E+5	5.8E+2	1.7E+5
Lead	7439921	**60**	11,000	NA	NA	1.1E+7	1.2E+3	1.1E+7
Manganese	7439965	**6500**	NA	NA	NA	NA	1.3E+5	1.3E+5
Nickel	7440020	**160**	65	NA	NA	1.7E+5	3.2E+3	1.7E+5
Zinc	7440666	**380**	62	NA	NA	3.8E+5	7.6E+3	3.8E+5
Pentachlorophenol	87865	**2.8**	NA	2.44E-8	592	2.7E+4	5.6E+1	2.7E+4

NA = Criterion or value is not available or not applicable.
* The formulas in this spreadsheet depend upon appropriate entries in these cells. Do not leave these cells blank. If numeric GSI values are not available, enter "GSI" in the appropriate cell.

TABLE 3.2

SUMMARY OF CHROMIUM SPECIATION IN SOIL
2013 RFI REPORT
FORMER GENERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Sample Location		*701M*	*701M*	*701M*	*CRA-705M*	*CRA-707SB*	*CRA-707SB*	*CRA-709M*	*CRA-709M*	*CRA-710M*	*CRA-710M*	*CRA-726SM*	*CRA-732M*	*CRA-732M*	*CRA-741I*	*CRA-757M*	*CRA-759SB*	*CRA-759SB*
Sample Identification		*SO-17358-032012-CB-213*	*SO-17358-032012-CB-214*	*SO-17358-032012-CB-215*	*SO-17358-011812-DR-010*	*SO-17358-011812-DR-015*	*SO-17358-011812-DR-016*	*SO-17358-011712-DR-005*	*SO-17358-011712-DR-006*	*SO-17358-011812-DR-007*	*SO-17358-011812-DR-008*	*SO-17358-032012-CB-211*	*SO-17358-031212-CB-185*	*SO-17358-031212-CB-186*	*SO-17358-030812-DR-059*	*SO-17358-030512-CB-119*	*SO-17358-030712-CB-157*	*SO-17358-030712-CB-158*
Sample Date		*3/20/2012*	*3/20/2012*	*3/20/2012*	*1/18/2012*	*1/18/2012*	*1/18/2012*	*1/17/2012*	*1/17/2012*	*1/18/2012*	*1/18/2012*	*3/20/2012*	*3/12/2012*	*3/12/2012*	*3/8/2012*	*3/5/2012*	*3/7/2012*	*3/7/2012*
Sample Type			*Duplicate*		*Duplicate*													
Depth		*(0-2) ft BGS*	*(0-2) ft BGS*	*(7.5-9.5) ft BGS*	*(0-2) ft BGS*	*(0-2) ft BGS*	*(2-3) ft BGS*	*(0-2) ft BGS*	*(2-4) ft BGS*	*(0-2) ft BGS*	*(2-4) ft BGS*	*(0-2) ft BGS*	*(0-2) ft BGS*	*(6.5-8.5) ft BGS*	*(0-2) ft BGS*	*(0-2) ft BGS*	*(0-2) ft BGS*	*(5-7) ft BGS*
matrix_code		*SO*	*SO*	*SO*	*SO*	*SO*	*SO*	*SO*	*SO*	*SO*	*SO*	*SO*	*SO*	*SO*	*SO*	*SO*	*SO*	*SO*
Metals																		
	Units																	
Chromium	mg/kg	4.7	5.3	5.2	9.8	14	8.6	6.3	9.3	9.2	6.2	7.1	7.3	5.8	7.7	9.4	6.8	6.4
Chromium III (trivalent)	mg/kg	4.3	4.9	4.9	9.3	13	7.9	5.5	8.9	8.3	5.7	6.6	6.8	5.1	7.2	9.1	6.4	5.8
Chromium VI (hexavalent)	mg/kg	0.36 J	0.42 J	0.37 J	0.42 J	1.9	0.75 J	0.76 J	0.38 J	0.9	0.53 J	0.43 J	0.52 J	0.79 J	0.52 J	0.38 J	0.38 J	0.6 J
Chromium III	%	91%	92%	94%	95%	93%	92%	87%	96%	90%	92%	93%	93%	88%	94%	97%	94%	91%
Chromium VI	%	8%	8%	7%	4%	14%	9%	12%	4%	10%	9%	6%	7%	14%	7%	4%	6%	9%

Sample Location		*CRA-789M*	*CRA-789M*	*CRA-790M*	*CRA-790M*	*CRA-792M*	*CRA-792M*	*CRA-793SB*	*CRA-799M*	*CRA-803M*	*CRA-807M*	*CRA-808M*	*CRA-828M*	*CRA-828M*	*CRA-829M*	*CRA-833M*	*CRA-833M*
Sample Identification		*SO-17358-030612-CB-132*	*SO-17358-030612-CB-133*	*SO-17358-030612-CB-134*	*SO-17358-030612-CB-135*	*SO-17358-030612-CB-136*	*SO-17358-030612-CB-137*	*SO-17358-030612-CB-138*	*SO-17358-030912-CB-182*	*SO-17358-030512-CB-128*	*SO-17358-030512-CB-122*	*SO-17358-030512-CB-124*	*SO-17358-011712-DR-003*	*SO-17358-011712-DR-004*	*SO-17358-011712-DR-002*	*SO-17358-011912-DR-021*	*SO-17358-011912-DR-022*
Sample Date		*3/6/2012*	*3/6/2012*	*3/6/2012*	*3/6/2012*	*3/6/2012*	*3/6/2012*	*3/6/2012*	*3/9/2012*	*3/5/2012*	*3/5/2012*	*3/5/2012*	*1/17/2012*	*1/17/2012*	*1/17/2012*	*1/19/2012*	*1/19/2012*
Sample Type												*Duplicate*					
Depth		*(0-2) ft BGS*	*(6-8) ft BGS*	*(0-2) ft BGS*	*(5-7) ft BGS*	*(0-2) ft BGS*	*(5-7) ft BGS*	*(0-2) ft BGS*	*(5-7) ft BGS*	*(0-2) ft BGS*	*(5-7) ft BGS*	*(0-2) ft BGS*	*(0-2) ft BGS*	*(2-4) ft BGS*	*(2.5-4.5) ft BGS*	*(0-2) ft BGS*	*(3-5) ft BGS*
matrix_code		*SO*	*SO*	*SO*	*SO*	*SO*	*SO*	*SO*	*SO*	*SO*	*SO*	*SO*	*SO*	*SO*	*SO*	*SO*	*SO*
Metals																	
	Units																
Chromium	mg/kg	10	5.9	9.4	6.7	17	6.3	5.5	10	8.2	6.3	8.3	10	4.6	8.5	7.7	11
Chromium III (trivalent)	mg/kg	9.9	5.5	9	6.4	16	6	5.2	9.7	7.6	5.7	7.7	9.5	3.9	8.1	7.3	10
Chromium VI (hexavalent)	mg/kg	0.34 J	0.41 J	0.4 J	0.29 J	0.72 J	0.3 J	0.34 J	0.36 J	0.59 J	0.63 J	0.67 J	0.74 J	0.65 J	0.35 J	0.45 J	0.85 J
Chromium III	%	99%	93%	96%	96%	94%	95%	95%	97%	93%	90%	93%	95%	85%	95%	95%	91%
Chromium VI	%	3%	7%	4%	4%	4%	5%	6%	4%	7%	10%	8%	7%	14%	4%	6%	8%

Average		Overall Average
Chromium III	%	93%
Chromium VI	%	7%

Overall, the majority of the Chromium at the Site is in the trivalent form. Therefore sample results will be screened against Chromium III criteria at the Site.

TABLE 3.4

BACKGROUND METALS IN SOIL SUMMARY
2013 RFI REPORT
FORMER GENERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Analyte	*Units*	*Number of Samples*	*Percent ND*	*Minimum*	*Maximum*	*Mean*	*Standard Deviation*	*Distribution*	*Outliers*	*Background Calculations*	
										Method	*Value*
Aluminum	mg/kg	9	0%	1900	4500	3022	922	Lognormal	0	x + 3s	5788
Antimony	mg/kg	9	0%	0.03 J	0.067 J	0.049	0.013	Lognormal	0	x + 3s	0.089
Arsenic	mg/kg	9	0%	1.8	5.2	3.55	1.236	Normal	0	x + 3s	7.26
Barium	mg/kg	9	0%	5.4	19.5	11.4	4.7	Lognormal	0	x + 3s	25.6
Beryllium	mg/kg	9	44%	0.052 J	0.18 U	0.092	0.035	Lognormal	0	x + 3s	0.196
Cadmium	mg/kg	9	33%	0.042 J	0.098	0.060	0.022	Not Normal	3	NP UTL	0.098
Calcium	mg/kg	5	0%	600	95000 J	29658	40929	Lognormal	0	x + 3s	152444
Chromium	mg/kg	9	0%	4.30	9.25	6.88	1.68	Normal	0	x + 3s	11.9
Chromium III (trivalent)	mg/kg	6	0%	4.30	8.65	6.26	1.91	Lognormal	0	x + 3s	12.0
Chromium VI (hexavalent)	mg/kg	6	50%	0.37 J	0.96 UJ	0.440	0.057	Lognormal	0	NP UTL	0.96 UJ
Cobalt	mg/kg	9	0%	1.6	3.65	2.64	0.580	Normal	0	x + 3s	4.38
Copper	mg/kg	9	0%	3.55	9.8	6.50	2.16	Normal	0	x + 3s	13.0
Iron	mg/kg	9	0%	3800	9650	7344	2047	Normal	0	x + 3s	13484
Lead	mg/kg	9	0%	2.50	5.45	4.08	1.02	Lognormal	0	x + 3s	7.14
Magnesium	mg/kg	5	0%	760	14000	6032	6421	Lognormal	0	x + 3s	25296
Manganese	mg/kg	9	0%	79 J	245	163	62	Normal	0	x + 3s	348
Mercury	mg/kg	9	56%	0.015	0.049 U	0.024	0.007	--	--	NP UTL	0.049 U
Nickel	mg/kg	9	0%	5.1	9.65	7.22	1.55	Normal	0	x + 3s	11.9
Potassium	mg/kg	5	0%	260 J	395	324	51.6	Lognormal	0	x + 3s	479
Selenium	mg/kg	9	0%	0.15	0.63	0.34	0.16	Normal	0	x + 3s	0.83
Silver	mg/kg	9	100%	0.075 U	0.089 U	0.042	0.003	--	--	NP UTL	0.089 U
Sodium	mg/kg	5	100%	77 U	88 U	42	2.33	--	--	NP UTL	88 U
Thallium	mg/kg	9	67%	0.079 U	0.12	0.065	0.033	--	--	NP UTL	0.12
Vanadium	mg/kg	9	0%	5.6	13	9.5	2.4	Normal	0	x + 3s	16.7
Zinc	mg/kg	9	0%	11	25	18	4.7	Normal	0	x + 3s	32

TABLE 3.5

BACKGROUND METALS IN GROUNDWATER SUMMARY
2013 RFI REPORT
FORMER GENERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Metals	*Units*	*Willow Run Creek*	*CVO*	*Powertrain*	*Fons/ Old Wayne*
Sample Elevation Range		~ AMSL 705 - 695		~ AMSL 720 -705	~ AMSL 705 - 690
Aluminum	mg/L	2.9	0.256	0.59	0.4
Antimony	mg/L	0.0062	0.002 U	0.002 U	0.06
Arsenic	mg/L	0.0091	0.015	0.025	0.09
Barium	mg/L	0.1	0.412	0.661	0.31
Beryllium	mg/L	NA	0.001 U	0.001 U	0.0025
Cadmium	mg/L	0.0002	0.001 U	0.001 U	0.0025
Calcium	mg/L	140	328	217	532
Chromium	mg/L	NA	0.016	0.01 U	0.005
Chromium III (trivalent)	mg/L	--	0.016	0.01 U	--
Chromium VI (hexavalent)	mg/L	--	0.010 U	0.01 U	--
Cobalt	mg/L	NA	0.007 U	0.02 U	0.025
Copper	mg/L	0.014	0.0029 U	0.010	0.0125
Iron	mg/L	3.6	13.1	9.59	50
Lead	mg/L	0.0078	0.003 U	0.006	0.009
Magnesium	mg/L	25	174	53.9	123
Manganese	mg/L	0.87	2.76	0.701	2
Mercury	mg/L	--	0.0002 U	0.04 U	0.00052
Nickel	mg/L	--	0.02 U	0.011	0.061
Potassium	mg/L	6.4	102	3.73	43
Selenium	mg/L	--	0.005 U	0.005 U	0.0015
Silver	mg/L	0.00025	0.0002 U	0.0002 U	0.005
Sodium	mg/L	170	2666	390	874
Thallium	mg/L	--	0.001 U	0.002 U	0.0038
Vanadium	mg/L	0.01	0.004 U	0.014	0.025
Zinc	mg/L	0.046	0.02 U	0.05 U	0.10

TABLE 3.6

CONSTITUENT OF CONCERN LIST CRITERIA - SOIL
2013 RFI REPORT
FORMER GENERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

FRACTION CODE	CONSTITUENT	CRITERIA
Inorganics	Aluminum	RDW,NRDW
Inorganics	Arsenic	RDW,NRDW,GSI,RDC,NRDC
Inorganics	Chromium	RDW,NRDW,GSI
Inorganics	Cobalt	RDW,NRDW,GSI
Inorganics	Iron	RDW,NRDW
Inorganics	Lead	RDW,NRDW,RDC,NRDC
Inorganics	Magnesium[1]	RDW,NRDW
Inorganics	Manganese	RDW,NRDW,GSI,NRPSI
Inorganics	Mercury	GSI
Inorganics	Selenium	RDW,NRDW,GSI
SVOCs	2-Methylnaphthalene[1]	GSI
SVOCs	3&4-Methylphenol[1]	GSI
SVOCs	Benzo(a)anthracene	RDC
SVOCs	Benzo(a)pyrene	RDC,NRDC
SVOCs	Benzo(b)fluoranthene	RDC
SVOCs	Dibenzofuran[1]	GSI
SVOCs	Fluoranthene	RDW,NRDW,GSI,GCC
SVOCs	Fluoranthene	GSI
SVOCs	Fluorene	GSI
SVOCs	Naphthalene	GSI
SVOCs	Phenanthrene	GSI
SVOCs	Pyrene	RDW,NRDW,GCC
VOCs	1,1,1-Trichloroethane	RDW,NRDW,GSI
VOCs	1,1,1-Trichloroethane	GSI
VOCs	1,1-Dichloroethene	RSVIIC
VOCs	Benzene	RDW,NRDW,GSI,WS,RSVIIC,NRSVIIC,RVSI,NRVSI,NR5VSIC, R2VSIC,NR2VSIC,RDC,NRDC,SS
VOCs	Carbon tetrachloride[3]	RDW,NRDW,GSI,RSVIIC,NRSVIIC
VOCs	Chlorobenzene	GSI
VOCs	Ethylbenzene	RDW,NRDW,GSI,GCC,RSVIIC,NRSVIIC,RDC,NRDC,SS
VOCs	Methylene chloride	RDW,NRDW
VOCs	Tetrachloroethene	RDW,NRDW,RSVIIC
VOCs	Toluene	GSI
VOCs	Trichloroethene	RDW,NRDW
VOCs	Vinyl chloride	RDW,NRDW
VOCs	Xylenes (total)	RDW,NRDW,GSI,GCC,RSVIIC,NRSVIIC,RDC,NRDC,SS
Inorganics	Cyanide (total)	GSI

Notes:

1. Constituents not included in the CCR COC but added in the RFI report include:

Magnesium

2-Methylnaphthalene

3&4-Methylphenol

Dibenzofuran

CONSTITUENT OF CONCERN LIST CRITERIA - SOIL
2013 RFI REPORT
FORMER GENERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

2. Constituents included in CCR COC but not in the RFI report include:

Silver

Benzo(k) fluoranthene

Chrysene

3. Carbon tetrachloride detection in single soild sample. Location resampled and detection determined to be lab error. See Table 3.8 for discussion.

4.

RDW - Residential Drinking Water
NRDW - Non-Residential Drinking Water Protection
GSI - Groundwater Surface Water Interface Protection
GCC - Groundwater Contact Protection
RSVIIC - Soil Volatilization to Indoor Air Inhalation
NRSVIIC - Non-Residential Soil Volatilization to Indoor Air Inhalation
RVSI - Infinite Source Volatile Soil Inhalation
NRVSI - Non-Residential Infinite Source Volatile Soil Inhalation
NR5VSIC - Non-Residential Finite VSIC for 5 Meter Source Thickness
R2VSIC - Finite VSIC for 2 Meter Source Thickness
NR2VSIC - Non-Residential Finite VSIC for 2 Meter Source Thickness
NRPSI - Non-Residential Particulate Soil Inhalation
RDC - Direct Contact
NRDC - Non-Residential Direct Contact
SS - Soil Saturation Concentration Screening
WS - Water Solubility

TABLE 3.7

CONSTITUENT OF CONCERN LIST CRITERIA - GROUNDWATER
2013 RFI REPORT
FORMER GENERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

FRACTION CODE	CONSTITUENTON	CRITERIA
Metals	Aluminum	RDW,NRDW
Metals	Aluminum (dissolved)	RDW,NRDW
Metals	Arsenic	RDW,NRDW,GSI,
Metals	Arsenic (dissolved)	RDW,NRDW,GSI,
Metals	Barium	RDW,NRDW,GSI,
Metals	Beryllium	RDW,NRDW
Metals	Cadmium	RDW,NRDW,GSI,
Metals	Chromium	RDW,NRDW,GSI,
Metals	Chromium (dissolved)	GSI,
Metals	Cobalt	NRDW,GSI
Metals	Copper	RDW,NRDW,GSI,
Metals	Copper (dissolved)	GSI,
Metals	Cyanide (amenable)	GSI,
Metals	Cyanide (total)	GSI,
Metals	Iron	RDW,NRDW
Metals	Iron (dissolved)	RDW,NRDW
Metals	Lead	RDW,NRDW,GSI,
Metals	Lead (dissolved)	RDW,NRDW
Metals	Magnesium	RDW
Metals	Manganese	RDW,NRDW,GSI,
Metals	Manganese (dissolved)	RDW,NRDW
Metals	Mercury	GSI,
Metals	Mercury (dissolved)	GSI,
Metals	Nickel	RDW,NRDW,GSI,
Metals	Nickel (dissolved)	RDW,NRDW
Metals	Selenium	RDW,NRDW,GSI,
Metals	Selenium (dissolved)	GSI,
Metals	Silver	GSI,
Metals	Sodium	RDW,NRDW
Metals	Thallium	RDW,NRDW,GSI,
Metals	Vanadium	RDW,NRDW,GSI,
Metals	Vanadium (dissolved)	RDW
Metals	Zinc	RDW,GSI,
Metals	Zinc (dissolved)	GSI,
PCB	Total PCBs	RDW,NRDW,GSI,
SVOCs	2-Methylnaphthalene	GSI,
SVOCs	Anthracene	RDW,NRDW,RGVIIC,NRGVIIC,GCC,WS
SVOCs	Benzo(a)anthracene	RDW,NRDW,GSI,WS
SVOCs	Benzo(a)pyrene	RDW,NRDW,GSI,WS
SVOCs	Benzo(b)fluoranthene	RDW,NRDW,GSI,WS
SVOCs	Benzo(g,h,i)perylene	RDW,NRDW,GSI,WS
SVOCs	Benzo(k)fluoranthene	RDW,NRDW,GSI,WS
SVOCs	bis(2-Ethylhexyl)phthalate (DEHP)	RDW,NRDW,GSI,
SVOCs	Carbazole	GSI,
SVOCs	Chrysene	RDW,NRDW,GSI,WS
SVOCs	Dibenzofuran	GSI,
SVOCs	Di-n-butylphthalate (DBP)	GSI,
SVOCs	Fluoranthene	RDW,NRDW,GSI,RGVIIC,NRGVIIC,GCC,WS
SVOCs	Fluorene	RDW,NRDW,GSI,RGVIIC,NRGVIIC,GCC,WS
SVOCs	Indeno(1,2,3-cd)pyrene	RDW,NRDW,GSI,WS
SVOCs	Naphthalene	GSI,
SVOCs	N-Propylbenzene	RDW
SVOCs	Phenanthrene	RDW,NRDW,GSI,RGVIIC,NRGVIIC,GCC,WS
SVOCs	Pyrene	RDW,NRDW,RGVIIC,NRGVIIC,GCC,WS
VOCs	1,1-Dichloroethene	RDW,NRDW
VOCs	1,2,4-Trimethylbenzene	RDW,NRDW,GSI,
VOCs	1,2-Dichloropropane	RDW,NRDW

TABLE 3.7

CONSTITUENT OF CONCERN LIST CRITERIA - GROUNDWATER
2013 RFI REPORT
FORMER GENERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

FRACTION CODE	CONSTITUENTON	CRITERIA
VOCs	1,3,5-Trimethylbenzene	RDW,NRDW,GSI,
VOCs	Benzene	RDW,NRDW,GSI,RGVIIC
VOCs	cis-1,2-Dichloroethene	RDW,NRDW,GSI,
VOCs	Ethylbenzene	RDW,NRDW,GSI,
VOCs	Isopropyl benzene	GSI,
VOCs	Methylene chloride	RDW,NRDW
VOCs	Tetrachloroethene	RDW,NRDW,GSI,
VOCs	Toluene	RDW,NRDW,GSI,
VOCs	trans-1,2-Dichloroethene	RDW,NRDW
VOCs	Trichloroethene	RDW,NRDW
VOCs	Trichloroethene	RDW,NRDW,GSI,
VOCs	Vinyl chloride	RDW,NRDW,GSI,RGVIIC,GCC
VOCs	Xylenes (total)	RDW,NRDW,GSI,

Notes:
Constituents not included in the CCR COC but added in the RFI report include:
Barium
Beryllium
Cobalt
Magnesium
Sodium
Thallium
N-Propylbenzene
trans-1,2-Dichloroethene

Constituents included in CCR COC but not in the RFI report include:
1,1-Dichloroethane
Chloroethane
N-Propylbenzene

Acronyms
RDW - Residential Drinking Water
NRDW - Non-Residential Drinking Water Protection
GSI - Groundwater Surface Water Interface Protection
GCC - Groundwater Contact Protection
WS - Water Solubility
RGVIIC - Residential Groundwater Volatilization to Indoor Air Inhalation
NRGVIIC - Non-Residential Groundwater Volatilization to Indoor Air Inhalation

TABLE 3.8

PART 201 CRITERIA EXCEEDANCES - SOIL
2013 RFI REPORT
FORMER GENERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation																		
									Michigan Act 451, Part 201 Cleanup Criteria and Part 213 Risk-based Screening Levels: Residential and Non-Residential Generic Cleanup Criteria [1]									
Perimeter Status (1)		Statewide	Drinking	Non-Residential	Groundwater	Groundwater	Soil Volatilization	Non-Residential Soil	Infinite Source	Non-Residential	Finite VSIC for	Non-Residential Finite	Finite VSIC for	Non-Residential Finite	Particulate	Non-Residential	Direct	Non-Residential	Soil Saturation
Sample Location		Default	Water	Drinking Water	Surface Water	Contact	to Indoor Air	Volatilization to Indoor	Volatile Soil	Infinite Source Volatile	5 Meter Source	VSIC for 5 Meter	2 Meter Source	VSIC for 2 Meter	Soil Inhalation	Particulate	Contact	Direct Contact	Concentration
Sample Identification (SO-17358-)		Background	Protection	Protection	Interface Protection	Protection	Inhalation	Air Inhalation	Inhalation	Soil Inhalation	Thickness	Source Thickness	Thickness	Source Thickness		Soil Inhalation			Screening
Sample Date		a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q	r
Sample Depth																			
Sample Type																			
Units																			
Volatile Organic Compounds (VOCs)																			
1,1,1-Trichloroethane	mg/kg	--	4	4	1.8	460	250	460	3800	4500	12000	15000	28000	31000	67000000	29000000	460	460	460
1,1,2,2-Tetrachloroethane	mg/kg	--	0.17	0.7	1.6	94	4.3	23	10	34	10	34	14	34	54000	68000	53	240	870
1,1,2-Trichloroethane	mg/kg	--	0.1	0.1	6.6	420	4.6	24	17	57	21	57	44	120	190000	250000	180	840	920
1,1-Dichloroethane	mg/kg	--	18	50	15	890	230	430	2100	2500	5900	6000	14000	14000	33000000	15000000	890	890	890
1,1-Dichloroethene	mg/kg	--	0.14	0.14	2.6	220	0.062	0.33	1.1	3.7	5.3	15	13	37	62000	78000	200	570	570
1,2,4-Trichlorobenzene	mg/kg	--	4.2	4.2	5.9	1100	1100	1100	28000	34000	28000	34000	28000	34000	25000000	11000000	990	1100	1100
1,2-Dibromo-3-chloropropane (DBCP)	mg/kg	--	0.01	0.01	ID	1.2	0.22	1.2	0.26	0.9	0.26	0.9	0.26	0.9	560	700	1.2	1.2	1.2
1,2-Dibromoethane (Ethylene dibromide)	mg/kg	--	0.02	0.02	0.11	0.5	0.67	3.6	1.7	5.8	1.7	5.8	3.3	9.8	14000	18000	0.092	0.43	890
1,2-Dichlorobenzene	mg/kg	--	14	14	0.28	210	210	210	39000	46000	39000	46000	52000	55000	100000000	44000000	210	210	210
1,2-Dichloroethane	mg/kg	--	0.1	0.1	7.2	380	2.1	11	6.2	21	11	33	26	74	120000	150000	91	420	1200
1,2-Dichloropropane	mg/kg	--	0.1	0.1	4.6	320	4	7.4	25	30	50	51	110	120	270000	120000	140	550	550
1,3-Dichlorobenzene	mg/kg	--	0.17	0.48	0.68	51	26	48	79	94	79	94	110	110	200000	8800	170	170	170
1,4-Dichlorobenzene	mg/kg	--	1.7	1.7	0.36	140	19	100	77	260	77	260	110	340	450000	570000	400	1900	--
2-Butanone (Methyl ethyl ketone) (MEK)	mg/kg	--	260	760	44	27000	27000	27000	29000	35000	29000	35000	35000	36000	67000000	29000000	27000	27000	27000
2-Hexanone	mg/kg	--	20	58	ID	2500	990	1800	1100	1300	1100	1300	1400	1500	2700000	1200000	2500	2500	2500
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	mg/kg	--	36	100	ID	2700	2700	2700	45000	53000	45000	53000	67000	70000	140000000	60000000	2700	2700	2700
Acetone	mg/kg	--	15	42	34	110000	110000	110000	130000	160000	130000	160000	190000	200000	390000000	170000000	23000	73000	110000
Benzene	mg/kg	--	0.1	0.1	4	220	1.6	8.4	13	45	34	99	79	230	380000	470000	180	400	400
Bromodichloromethane	mg/kg	--	1.6	1.6	ID	280	1.2	6.4	9.1	31	9.7	31	19	57	84000	110000	110	490	1500
Bromoform	mg/kg	--	1.6	1.6	ID	870	150	770	900	3100	900	3100	900	3100	2800000	3600000	820	870	870
Bromomethane (Methyl bromide)	mg/kg	--	0.2	0.58	0.7	1400	0.86	1.6	11	13	57	57	140	140	330000	150000	320	1000	2200
Carbon disulfide	mg/kg	--	16	46	ID	280	76	140	1300	1600	7900	8000	19000	19000	47000000	21000000	280	280	280
Carbon tetrachloride	mg/kg	--	0.1	0.1	0.9	92	0.19	0.99	3.5	12	12	34	28	79	130000	170000	96	390	390
Chlorobenzene	mg/kg	--	2	2	0.5	260	120	220	770	920	990	1100	2100	2100	4700000	2100000	260	260	260
Chloroethane	mg/kg	--	8.6	34	22	950	950	950	30000	36000	120000	120000	280000	280000	670000000	290000000	950	950	950
Chloroform (Trichloromethane)	mg/kg	--	1.6	1.6	7	1500	7.2	38	45	150	120	340	270	790	1300000	1600000	1200	1500	1500
Chloromethane (Methyl chloride)	mg/kg	--	5.2	22	ID	1100	2.3	10	40	120	410	1000	1000	2500	4900000	2600000	1100	1100	1100
cis-1,2-Dichloroethene	mg/kg	--	1.4	1.4	12	640	22	41	180	210	420	430	990	1000	2300000	1000000	640	640	640
cis-1,3-Dichloropropene	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cyclohexane	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dibromochloromethane	mg/kg	--	1.6	1.6	ID	360	3.9	21	24	80	24	80	33	98	130000	160000	110	500	610
Dichlorodifluoromethane (CFC-12)	mg/kg	--	95	270	ID	1000	900	1700	53000	63000	550000	550000	1400000	1400000	3300000000	1500000000	1000	1000	1000
Ethylbenzene	mg/kg	--	1.5	1.5	0.36	140	87	140	720	2400	1000	3100	2200	6500	10000000	13000000	140	140	140
Isopropyl benzene	mg/kg	--	91	260	3.2	390	390	390	1700	2000	1700	2000	2800	3000	5800000	2600000	390	390	390
Methyl acetate	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Methyl cyclohexane	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Methyl tert butyl ether (MTBE)	mg/kg	--	0.8	0.8	140	5900	5900	5900	25000	30000	39000	41000	87000	89000	200000000	88000000	1500	5900	5900
Methylene chloride	mg/kg	--	0.1	0.1	30	2300	45	240	210	700	590	1700	1400	4000	6600000	8300000	1300	2300	2300
Styrene	mg/kg	--	2.7	2.7	2.1	270	250	520	970	3300	970	3300	1400	4200	5500000	6900000	400	520	520
Tetrachloroethene	mg/kg	--	0.1	0.1	1.2	88	11	21	170	210	480	490	1100	1100	2700000	1200000	88	88	88
Toluene	mg/kg	--	16	16	5.4	250	250	250	2800	3300	5100	36000	12000	36000	27000000	12000000	250	250	250
trans-1,2-Dichloroethene	mg/kg	--	2	2	30	1400	23	43	280	330	830	840	2000	2000	4700000	2100000	1400	1400	1400
trans-1,3-Dichloropropene	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Trichloroethene	mg/kg	--	0.1	0.1	4	440	1.0	1.9	11	14	25	25	57	58	130000	59000	500	500	500

TABLE 3.8

PART 201 CRITERIA EXCEEDANCES - SOIL
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FORMER GENERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation		*Michigan Act 451, Part 201 Cleanup Criteria and Part 213 Risk-based Screening Levels: Residential and Non-Residential Generic Cleanup Criteria* [1]																	
Perimeter Status (1)		Statewide	Drinking	Non-Residential	Groundwater	Groundwater	Soil Volatilization	Non-Residential Soil	Infinite Source	Non-Residential	Finite VSIC for	Non-Residential Finite	Finite VSIC for	Non-Residential Finite	Particulate	Non-Residential	Direct	Non-Residential	Soil Saturation
Sample Location		Default	Water	Drinking Water	Surface Water	Contact	to Indoor Air	Volatilization to Indoor	Volatile Soil	Infinite Source Volatile	5 Meter Source	VSIC for 5 Meter	2 Meter Source	VSIC for 2 Meter	Soil Inhalation	Particulate	Contact	Direct Contact	Concentration
Sample Identification (SO-17358-)		Background	Protection	Protection	Interface Protection	Protection	Inhalation	Air Inhalation	Inhalation	Soil Inhalation	Thickness	Source Thickness	Thickness	Source Thickness		Soil Inhalation			Screening
Sample Date		a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q	r
Sample Depth																			
Sample Type																			
	Units																		
VOCs Continued																			
Trichlorofluoromethane (CFC-11)	mg/kg	--	52	150	--	560	560	560	92000	110000	630000	140000000	1500000	140000000	3800000000	1700000000	560	560	560
Trifluorotrichloroethane (Freon 113)	mg/kg	--	550	550	1.7	550	550	550	180000	210000	880000	890000	2100000	2100000	5100000000	2300000000	550	550	550
Vinyl chloride	mg/kg	--	0.04	0.04	0.26	20	0.27	2.8	4.2	29	30	170	73	420	350000	890000	3.8	34	490
Xylenes (total)	mg/kg	--	5.6	5.6	0.82	150	150	150	46000	54000	61000	65000	130000	130000	290000000	130000000	150	150	150
Semi-Volatile Organic Compounds (SVOCs)																			
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4,5-Trichlorophenol	mg/kg	--	39	110	--	9100	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	23000000	10000000	23000	73000	--
2,4,6-Trichlorophenol	mg/kg	--	2.4	9.4	0.33	200	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	1000000	1300000	710	3300	--
2,4-Dichlorophenol	mg/kg	--	1.5	4.2	0.33	960	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	5100000	2300000	660	1800	1800
2,4-Dimethylphenol	mg/kg	--	7.4	20	7.6	10000	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	4700000	2100000	11000	36000	--
2,4-Dinitrophenol	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4-Dinitrotoluene	mg/kg	--	0.43	0.64	--	170	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	16000	20000	48	220	--
2,6-Dinitrotoluene	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Chloronaphthalene	mg/kg	--	620	1800	--	2300	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	56000	180000	--
2-Chlorophenol	mg/kg	--	0.9	2.6	0.36	1900	430	800	960	1100	960	1100	960	1100	1200000	530000	1400	4500	19000
2-Methylnaphthalene	mg/kg	--	57	170	4.2	5500	2700	4900	1500	1800	1500	1800	1500	1800	670000	290000	8100	26000	--
2-Methylphenol	mg/kg	--	7.4	20	1	16000	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	6700000	2900000	11000	36000	--
2-Nitroaniline	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Nitrophenol	mg/kg	--	0.4	1.2	ID	1600	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	ID	ID	630	2000	--
3&4-Methylphenol	mg/kg	--	7.4	20	1	16000	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	6700000	2900000	11000	36000	--
3,3'-Dichlorobenzidine	mg/kg	--	2	2	2	4.6	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	6500	8200	6.6	30	--
3-Nitroaniline	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4,6-Dinitro-2-methylphenol	mg/kg	--	0.83	0.83	--	190	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	130000	59000	79	260	--
4-Bromophenyl phenyl ether	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Chloro-3-methylphenol	mg/kg	--	5.8	16	0.28	3000	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	ID	ID	4500	15000	--
4-Chloroaniline	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Chlorophenyl phenyl ether	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Nitroaniline	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Nitrophenol	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Acenaphthene	mg/kg	--	300	880	8.7	970	190000	350000	81000	97000	81000	97000	81000	97000	14000000	6200000	41000	130000	--
Acenaphthylene	mg/kg	--	5.9	17	ID	440	1600	3000	2200	2700	2200	2700	2200	2700	2300000	1000000	1600	5200	--
Acetophenone	mg/kg	--	30	88	ID	1100	1100	1100	44000	52000	44000	52000	44000	52000	33000000	14000000	1100	1100	1100
Anthracene	mg/kg	--	41	41	ID	41	1000000	1000000	1400000	1600000	1400000	1600000	1400000	1600000	67000000	29000000	230000	730000	--
Atrazine	mg/kg	--	0.06	0.06	0.15	110	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	ID	ID	71	330	--
Benzaldehyde	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(a)anthracene	mg/kg	--	NLL	NLL	NLL	NLL	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	ID	ID	20	80	--
Benzo(a)pyrene	mg/kg	--	NLL	NLL	NLL	NLL	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	1500	1900	2	8	--
Benzo(b)fluoranthene	mg/kg	--	NLL	NLL	NLL	NLL	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	20	80	--
Benzo(g,h,i)perylene	mg/kg	--	NLL	NLL	NLL	NLL	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	800000	350000	2500	7000	--
Benzo(k)fluoranthene	mg/kg	--	NLL	NLL	NLL	NLL	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	ID	ID	200	800	--
Biphenyl (1,1-Biphenyl)	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
bis(2-Chloroethoxy)methane	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
bis(2-Chloroethyl)ether	mg/kg	--	0.10	0.17	0.1	110	8.3	44	3.8	13	3.8	13	3.8	13	9400	12000	13	58	2200
bis(2-Ethylhexyl)phthalate (DEHP)	mg/kg	--	NLL	NLL	NLL	NLL	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	700000	890000	2800	10000	10000

TABLE 3.8

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YPSILANTI, MICHIGAN

Site Section Designation		*Michigan Act 451, Part 201 Cleanup Criteria and Part 213 Risk-based Screening Levels: Residential and Non-Residential Generic Cleanup Criteria* [1]																
Perimeter Status (1)		Statewide	Drinking	Non-Residential	Groundwater	Groundwater	Soil Volatilization	Non-Residential Soil	Infinite Source	Non-Residential	Finite VSIC for	Non-Residential Finite	Finite VSIC for	Non-Residential Finite	Particulate	Non-Residential	Direct	Non-Residential	Soil Saturation
Sample Location		Default	Water	Drinking Water	Surface Water	Contact	to Indoor Air	Volatilization to Indoor	Volatile Soil	Infinite Source Volatile	5 Meter Source	VSIC for 5 Meter	2 Meter Source	VSIC for 2 Meter	Soil Inhalation	Particulate	Contact	Direct Contact	Concentration
Sample Identification (SO-17358-)		Background	Protection	Protection	Interface Protection	Protection	Inhalation	Air Inhalation	Inhalation	Soil Inhalation	Thickness	Source Thickness	Thickness	Source Thickness		Soil Inhalation			Screening
Sample Date		a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q	r
Sample Depth																			
Sample Type																			
	Units																		
SVOCs Continued																			
Butyl benzylphthalate (BBP)	mg/kg	--	310	310	120	310	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	47000000	21000000	310	310	310
Caprolactam	mg/kg	--	120	340	--	1000000	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	670000	290000	53000	310000	--
Carbazole	mg/kg	--	9.4	39	1.1	820	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	62000	78000	530	2400	--
Chrysene	mg/kg	--	NLL	NLL	NLL	NLL	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	2000	8000	--
Dibenz(a,h)anthracene	mg/kg	--	NLL	NLL	NLL	NLL	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	ID	ID	2	8	--
Dibenzofuran	mg/kg	--	ID	ID	1.7	ID	2000	3600	130	160	130	160	130	160	6700	2900	ID	ID	--
Diethyl phthalate	mg/kg	--	110	320	2.2	740	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	3300000	1500000	740	740	740
Dimethyl phthalate	mg/kg	--	790	790	--	790	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	3300000	1500000	790	790	790
Di-n-butylphthalate (DBP)	mg/kg	--	760	760	11	760	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	3300000	1500000	760	760	760
Di-n-octyl phthalate (DnOP)	mg/kg	--	100000	140000	ID	140000	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	31000000	14000000	6900	20000	140000
Fluoranthene	mg/kg	--	730	730	5.5	730	1000000	1000000	740000	890000	740000	880000	740000	880000	9300000	4100000	46000	130000	--
Fluorene	mg/kg	--	390	890	5.3	890	580000	1000000	130000	150000	130000	150000	130000	150000	9300000	4100000	27000	87000	--
Hexachlorobenzene	mg/kg	--	1.8	1.8	0.35	8.2	41	220	17	56	17	56	17	56	6800	8500	8.9	37	--
Hexachlorobutadiene	mg/kg	--	26	72	0.091	350	130	350	130	460	130	460	130	460	140000	180000	100	350	350
Hexachlorocyclopentadiene	mg/kg	--	320	320	ID	720	30	56	50	60	50	60	50	60	13000	5900	720	720	720
Hexachloroethane	mg/kg	--	0.43	1.2	1.8	110	40	79	550	660	930	1400	930	1400	230000	100000	230	730	--
Indeno(1,2,3-cd)pyrene	mg/kg	--	NLL	NLL	NLL	NLL	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	ID	ID	20	80	--
Isophorone	mg/kg	--	15	62	26	2400	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	12000000	8200000	2400	2400	2400
Naphthalene	mg/kg	--	35	100	0.73	2100	250	470	300	350	300	350	300	350	200000	88000	16000	52000	--
Nitrobenzene	mg/kg	--	0.33	0.33	3.6	220	91	170	54	64	54	64	54	64	47000	21000	100	340	490
N-Nitrosodi-n-propylamine	mg/kg	--	0.33	0.33	--	7.2	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	1600	2000	1.2	5.4	1500
N-Nitrosodiphenylamine	mg/kg	--	5.4	22	--	700	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	2200000	2800000	1700	7800	--
Pentachlorophenol	mg/kg	--	0.022	0.022	27	4.3	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	100000	130000	90	320	--
Phenanthrene	mg/kg	--	56	160	2.1	1100	2800	5100	160	190	160	190	160	190	6700	2900	1600	5200	--
Phenol	mg/kg	--	88	260	9	12000	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	40000000	18000000	12000	12000	12000
Pyrene	mg/kg	--	480	480	ID	480	1000000	1000000	650000	780000	650000	780000	650000	780000	6700000	2900000	29000	84000	--
Metals																			
Aluminum	mg/kg	6900	1	1	--	1000000	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	ID	ID	50000	370000	--
Antimony	mg/kg	--	4.3	4.3	94	49000	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	13000	5900	180	670	--
Arsenic	mg/kg	5.8	4.6	4.6	4.6	2000	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	720	910	7.6	37	--
Barium	mg/kg	75	1300	1300	1200	1000000	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	330000	150000	37000	130000	--
Beryllium	mg/kg	--	51	51	950	1000000	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	1300	590	410	1600	--
Cadmium	mg/kg	1.2	6	6	7.30	230000	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	1700	2200	550	2100	--
Calcium	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chromium	mg/kg	18	1000000	1000000	6600000	1000000	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	330000	150000	790000	1000000	--
Chromium III (trivalent)	mg/kg	18	1000000	1000000	6600000	1000000	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	330000	150000	790000	1000000	--
Chromium VI (hexavalent)	mg/kg	--	30	30	3.3	140000	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	260	240	2500	9200	--
Cobalt	mg/kg	6.8	0.8	2	2	48000	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	13000	5900	2600	9000	--
Copper	mg/kg	32	5800	5800	170	1000000	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	130000	59000	20000	73000	--
Iron	mg/kg	12000	6	6	--	1000000	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	ID	ID	160000	580000	--
Lead	mg/kg	21	700	700	11000	ID	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	100000	44000	400	900	--
Lead - coarse fraction	mg/kg	21	--	--	--	--	--	--	--	--	--	--	--	--	--	--	400	900	--
Lead - fine fraction	mg/kg	21	--	--	--	--	--	--	--	--	--	--	--	--	100000	44000	400	900	--
Lead - total (calculated by fine/coarse fraction)	mg/kg	21	700	700	--	ID	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	--	--	--	--	--
Magnesium	mg/kg	--	8000	22000	--	1000000	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	6700000	2900000	1000000	1000000	--

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Site Section Designation		*Michigan Act 451, Part 201 Cleanup Criteria and Part 213 Risk-based Screening Levels: Residential and Non-Residential Generic Cleanup Criteria* [1]																	
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Sample Location		Default	Water	Drinking Water	Surface Water	Contact	to Indoor Air	Volatilization to Indoor	Volatile Soil	Infinite Source Volatile	5 Meter Source	VSIC for 5 Meter	2 Meter Source	VSIC for 2 Meter	Soil Inhalation	Particulate	Contact	Direct Contact	Concentration
Sample Identification (SO-17358-)		Background	Protection	Protection	Interface Protection	Protection	Inhalation	Air Inhalation	Inhalation	Soil Inhalation	Thickness	Source Thickness	Thickness	Source Thickness		Soil Inhalation			Screening
Sample Date		a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q	r
Sample Depth																			
Sample Type																			
	Units																		
Metals Continued																			
Manganese	mg/kg	440	1	1	130	180000	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	3300	1500	25000	90000	--
Mercury	mg/kg	0.13	1.7	1.7	0.05	47	48	89	52	62	52	62	52	62	20000	8800	160	580	--
Nickel	mg/kg	20	100	100	170	1000000	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	13000	16000	40000	150000	--
Potassium	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Selenium	mg/kg	0.41	4	4	0.4	78000	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	130000	59000	2600	9600	--
Silver	mg/kg	1	4.5	13	0.1	200000	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	6700	2900	2500	9000	--
Sodium	mg/kg	--	2500	7000	--	1000000	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	ID	ID	1000000	1000000	--
Thallium	mg/kg	--	2.3	2.3	4.2	15000	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	13000	5900	35	130	--
Vanadium	mg/kg	--	72	990	430	1000000	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	ID	ID	750	5500	--
Zinc	mg/kg	47	2400	5000	380	1000000	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	ID	ID	170000	630000	--
Polychlorinated biphenyls (PCBs)																			
Aroclor-1016 (PCB-1016)	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Aroclor-1221 (PCB-1221)	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Aroclor-1232 (PCB-1232)	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Aroclor-1242 (PCB-1242)	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Aroclor-1248 (PCB-1248)	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Aroclor-1254 (PCB-1254)	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Aroclor-1260 (PCB-1260)	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Aroclor-1262 (PCB-1262)	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Aroclor-1268 (PCB-1268)	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total PCBs	mg/kg	--	NLL	NLL	NLL	NLL	3000	16000	240	810	7900	28000	7900	28000	5200	6500	4	16	--

Notes

Michigan Part 201 generic clean up criteria (updated September 28, 2012)

ID - Insufficient data to develop criterion

NLV - Hazardous substance is not likely to volatilize under most conditions

NA - Criterion or value is not available

Perimeter Status (1) - N - non-perimeter, Y - perimeter

mg/kg - milligram/kilogram

Notes:

U - Not detected at the associated reporting limit.

J - Estimated concentration.

UJ - Not detected; associated reporting limit is estimated.

R - Rejected

TABLE 3.8

PART 201 CRITERIA EXCEEDANCES - SOIL
2013 RFI REPORT
FORMER GENERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation		*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*
Perimeter Status (1)		*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*
Sample Location		*CRA-717I*	*CRA-717I*	*CRA-789M*	*CRA-789M*	*CRA-790M*	*CRA-790M*	*CRA-792M*	*CRA-792M*	*CRA-793SB*	*CRA-793SB*	*CRA-795M*	*CRA-795M*	*CRA-796SB*	*CRA-796SB*	*CRA-796SB*	*CRA-798M*	*CRA-798M*	*CRA-799M*
Sample Identification (SO-17358-)		*031612-DR-076*	*031612-DR-077*	*030612-CB-132*	*030612-CB-133*	*030612-CB-134*	*030612-CB-135*	*030612-CB-136*	*030612-CB-137*	*030612-CB-138*	*030612-CB-139*	*030612-CB-140*	*030612-CB-141*	*030712-CB-142*	*030712-CB-143*	*030712-CB-144*	*030912-CB-179*	*030912-CB-180*	*030912-CB-181*
Sample Date		*3/16/2012*	*3/16/2012*	*3/6/2012*	*3/6/2012*	*3/6/2012*	*3/6/2012*	*3/6/2012*	*3/6/2012*	*3/6/2012*	*3/6/2012*	*3/6/2012*	*3/6/2012*	*3/7/2012*	*3/7/2012*	*3/7/2012*	*3/9/2012*	*3/9/2012*	*3/9/2012*
Sample Depth		*(0-2) ft BGS*	*(2-4) ft BGS*	*(1-3) ft BGS*	*(6-8) ft BGS*	*(1-3) ft BGS*	*(5-7) ft BGS*	*(1-3) ft BGS*	*(5-7) ft BGS*	*(1-3) ft BGS*	*(5-7) ft BGS*	*(1-3) ft BGS*	*(5-7) ft BGS*	*(1-3) ft BGS*	*(1-3) ft BGS*	*(4-6) ft BGS*	*(1-3) ft BGS*	*(5-7) ft BGS*	*(1-3) ft BGS*
Sample Type															*Duplicate*				
	Units																		
Volatile Organic Compounds (VOCs)																			
1,1,1-Trichloroethane	mg/kg	0.044 U	0.049 U	0.043 U	0.043 U	0.04 U	0.041 U	0.041 U	0.042 U	0.042 U	0.044 U	0.042 U	0.041 U	0.042 U	0.039 U	0.04 U	0.043 U	0.042 U	0.041 U
1,1,2,2-Tetrachloroethane	mg/kg	0.044 U	0.049 U	0.043 U	0.043 U	0.04 U	0.041 U	0.041 U	0.042 U	0.042 U	0.044 U	0.042 U	0.041 U	0.042 U	0.039 U	0.04 U	0.043 U	0.042 U	0.041 U
1,1,2-Trichloroethane	mg/kg	0.044 U	0.049 U	0.043 U	0.043 U	0.04 U	0.041 U	0.041 U	0.042 U	0.042 U	0.044 U	0.042 U	0.041 U	0.042 U	0.039 U	0.04 U	0.043 U	0.042 U	0.041 U
1,1-Dichloroethane	mg/kg	0.044 U	0.049 U	0.043 U	0.043 U	0.04 U	0.041 U	0.041 U	0.042 U	0.042 U	0.044 U	0.042 U	0.041 U	0.042 U	0.039 U	0.04 U	0.043 U	0.042 U	0.041 U
1,1-Dichloroethene	mg/kg	0.044 U	0.049 U	0.043 U	0.043 U	0.04 U	0.041 U	0.041 U	0.042 U	0.042 U	0.044 U	0.042 U	0.041 U	0.042 U	0.039 U	0.04 U	0.043 U	0.042 U	0.041 U
1,2,4-Trichlorobenzene	mg/kg	0.22 U	0.24 U	0.22 U	0.22 U	0.2 U	0.2 U	0.21 U	0.21 U	0.21 U	0.22 U	0.21 U	0.21 U	0.21 U	0.19 U	0.2 U	0.22 U	0.21 U	0.21 U
1,2-Dibromo-3-chloropropane (DBCP)	mg/kg	0.22 U	0.24 U	0.22 U	0.22 U	0.2 U	0.2 U	0.21 U	0.21 U	0.21 U	0.22 U	0.21 U	0.21 U	0.21 U	0.19 U	0.2 U	0.22 U	0.21 U	0.21 U
1,2-Dibromoethane (Ethylene dibromide)	mg/kg	0.22 U	0.24 U	0.22 U	0.22 U	0.2 U	0.2 U	0.21 U	0.21 U	0.21 U	0.22 U	0.21 U	0.21 U	0.21 U	0.19 U	0.2 U	0.22 U	0.21 U	0.21 U
1,2-Dichlorobenzene	mg/kg	0.088 U	0.098 U	0.086 U	0.086 U	0.081 U	0.082 U	0.083 U	0.084 U	0.084 U	0.088 U	0.084 U	0.082 U	0.084 U	0.078 U	0.079 U	0.086 U	0.083 U	0.082 U
1,2-Dichloroethane	mg/kg	0.044 U	0.049 U	0.043 U	0.043 U	0.04 U	0.041 U	0.041 U	0.042 U	0.042 U	0.044 U	0.042 U	0.041 U	0.042 U	0.039 U	0.04 U	0.043 U	0.042 U	0.041 U
1,2-Dichloropropane	mg/kg	0.044 U	0.049 U	0.043 U	0.043 U	0.04 U	0.041 U	0.041 U	0.042 U	0.042 U	0.044 U	0.042 U	0.041 U	0.042 U	0.039 U	0.04 U	0.043 U	0.042 U	0.041 U
1,3-Dichlorobenzene	mg/kg	0.088 U	0.098 U	0.086 U	0.086 U	0.081 U	0.082 U	0.083 U	0.084 U	0.084 U	0.088 U	0.084 U	0.082 U	0.084 U	0.078 U	0.079 U	0.086 U	0.083 U	0.082 U
1,4-Dichlorobenzene	mg/kg	0.088 U	0.098 U	0.086 U	0.086 U	0.081 U	0.082 U	0.083 U	0.084 U	0.084 U	0.088 U	0.084 U	0.082 U	0.084 U	0.078 U	0.079 U	0.086 U	0.083 U	0.082 U
2-Butanone (Methyl ethyl ketone) (MEK)	mg/kg	0.66 U	0.73 U	0.65 U	0.65 U	0.61 U	0.61 U	0.62 U	0.63 U	0.63 U	0.66 U	0.63 U	0.62 U	0.63 U	0.58 U	0.6 U	0.65 U	0.62 U	0.62 U
2-Hexanone	mg/kg	2.2 U	2.4 U	2.2 U	2.2 U	2 U	2 U	2.1 U	2.1 U	2.1 U	2.2 U	2.1 U	2.1 U	2.1 U	1.9 U	2 U	2.2 U	2.1 U	2.1 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	mg/kg	2.2 U	2.4 U	2.2 U	2.2 U	2 U	2 U	2.1 U	2.1 U	2.1 U	2.2 U	2.1 U	2.1 U	2.1 U	1.9 U	2 U	2.2 U	2.1 U	2.1 U
Acetone	mg/kg	0.66 U	0.73 U	0.65 U	0.65 U	0.61 U	0.61 U	0.62 U	0.63 U	0.63 U	0.66 U	0.63 U	0.62 U	0.63 U	0.58 U	0.6 U	0.65 U	0.62 U	0.62 U
Benzene	mg/kg	0.044 U	0.049 U	0.043 U	0.043 U	0.04 U	0.041 U	0.041 U	0.042 U	0.042 U	0.044 U	0.042 U	0.041 U	0.042 U	0.039 U	0.04 U	0.043 U	0.042 U	0.041 U
Bromodichloromethane	mg/kg	0.088 U	0.098 U	0.086 U	0.086 U	0.081 U	0.082 U	0.083 U	0.084 U	0.084 U	0.088 U	0.084 U	0.082 U	0.084 U	0.078 U	0.079 U	0.086 U	0.083 U	0.082 U
Bromoform	mg/kg	0.088 U	0.098 U	0.086 U	0.086 U	0.081 U	0.082 U	0.083 U	0.084 U	0.084 U	0.088 U	0.084 U	0.082 U	0.084 U	0.078 U	0.079 U	0.086 U	0.083 U	0.082 U
Bromomethane (Methyl bromide)	mg/kg	0.22 U	0.24 U	0.22 U	0.22 U	0.2 U	0.2 U	0.21 U	0.21 U	0.21 U	0.22 U	0.21 U	0.21 U	0.21 U	0.19 U	0.2 U	0.22 U	0.21 U	0.21 U
Carbon disulfide	mg/kg	0.22 U	0.24 U	0.22 U	0.22 U	0.2 U	0.2 U	0.21 U	0.21 U	0.21 U	0.22 U	0.21 U	0.21 U	0.21 U	0.19 U	0.2 U	0.22 U	0.21 U	0.21 U
Carbon tetrachloride	mg/kg	0.044 U	0.049 U	0.043 U	0.043 U	0.04 U	0.041 U	0.041 U	0.042 U	0.042 U	0.044 U	0.042 U	0.041 U	0.042 U	0.039 U	0.04 U	0.043 U	0.042 U	0.041 U
Chlorobenzene	mg/kg	0.044 U	0.049 U	0.043 U	0.043 U	0.04 U	0.041 U	0.041 U	0.042 U	0.042 U	0.044 U	0.042 U	0.041 U	0.042 U	0.039 U	0.04 U	0.043 U	0.042 U	0.041 U
Chloroethane	mg/kg	0.22 U	0.24 U	0.22 U	0.22 U	0.2 U	0.2 U	0.21 U	0.21 U	0.21 U	0.22 U	0.21 U	0.21 U	0.21 U	0.19 U	0.2 U	0.22 U	0.21 U	0.21 U
Chloroform (Trichloromethane)	mg/kg	0.044 U	0.049 U	0.043 U	0.043 U	0.04 U	0.041 U	0.041 U	0.042 U	0.042 U	0.044 U	0.042 U	0.041 U	0.042 U	0.039 U	0.04 U	0.043 U	0.042 U	0.041 U
Chloromethane (Methyl chloride)	mg/kg	0.22 U	0.24 U	0.22 U	0.22 U	0.2 U	0.2 U	0.21 U	0.21 U	0.21 U	0.22 U	0.21 U	0.21 U	0.21 U	0.19 U	0.2 U	0.22 U	0.21 U	0.21 U
cis-1,2-Dichloroethene	mg/kg	0.044 U	0.049 U	0.043 U	0.043 U	0.04 U	0.041 U	0.041 U	0.042 U	0.042 U	0.044 U	0.042 U	0.041 U	0.042 U	0.039 U	0.04 U	0.043 U	0.042 U	0.041 U
cis-1,3-Dichloropropene	mg/kg	0.044 U	0.049 U	0.043 U	0.043 U	0.04 U	0.041 U	0.041 U	0.042 U	0.042 U	0.044 U	0.042 U	0.041 U	0.042 U	0.039 U	0.04 U	0.043 U	0.042 U	0.041 U
Cyclohexane	mg/kg	1.1 U	1.2 U	1 U	1 U	0.97 U	0.98 U	0.99 U	1 U	1 U	1.1 U	1 U	0.98 U	1 U	0.93 U	0.95 U	1 U	1 U	0.98 U
Dibromochloromethane	mg/kg	0.044 U	0.049 U	0.043 U	0.043 U	0.04 U	0.041 U	0.041 U	0.042 U	0.042 U	0.044 U	0.042 U	0.041 U	0.042 U	0.039 U	0.04 U	0.043 U	0.042 U	0.041 U
Dichlorodifluoromethane (CFC-12)	mg/kg	0.088 U	0.098 U	0.086 U	0.086 U	0.081 U	0.082 U	0.083 U	0.084 U	0.084 U	0.088 U	0.084 U	0.082 U	0.084 U	0.078 U	0.079 U	0.086 U	0.083 U	0.082 U
Ethylbenzene	mg/kg	0.044 U	0.049 U	0.0068 J	0.043 U	0.04 U	0.041 U	0.0071 J	0.042 U	0.042 U	0.044 U	0.042 U	0.041 U	0.042 U	0.039 U	0.04 U	0.043 U	0.042 U	0.041 U
Isopropyl benzene	mg/kg	0.22 U	0.24 U	0.22 U	0.22 U	0.2 U	0.2 U	0.21 U	0.21 U	0.21 U	0.22 U	0.21 U	0.21 U	0.21 U	0.19 U	0.2 U	0.22 U	0.21 U	0.21 U
Methyl acetate	mg/kg	1.1 U	1.2 U	1 U	1 U	0.97 U	0.98 U	0.99 U	1 U	1 U	1.1 U	1 U	0.98 U	1 U	0.93 U	0.95 U	1 U	1 U	0.98 U
Methyl cyclohexane	mg/kg	1.1 U	1.2 U	0.035 J	1 U	0.97 U	0.98 U	0.094 J	1 U	1 U	1.1 U	1 U	0.98 U	1 U	0.054 J	0.02 J	1 U	1 U	0.98 U
Methyl tert butyl ether (MTBE)	mg/kg	0.22 U	0.24 U	0.22 U	0.22 U	0.2 U	0.2 U	0.21 U	0.21 U	0.21 U	0.22 U	0.21 U	0.21 U	0.21 U	0.19 U	0.2 U	0.22 U	0.21 U	0.21 U
Methylene chloride	mg/kg	0.22 U	0.24 U	0.22 U	0.22 U	0.2 U	0.2 U	0.21 U	0.21 U	0.21 U	0.22 U	0.21 U	0.21 U	0.21 U	0.19 U	0.2 U	0.22 U	0.21 U	0.21 U
Styrene	mg/kg	0.044 U	0.049 U	0.043 U	0.043 U	0.04 U	0.041 U	0.041 U	0.042 U	0.042 U	0.044 U	0.042 U	0.041 U	0.042 U	0.039 U	0.04 U	0.043 U	0.042 U	0.041 U
Tetrachloroethene	mg/kg	0.044 U	0.049 U	0.013 J	0.013 J	0.04 U	0.041 U	0.041 U	0.042 U	0.042 U	0.044 U	0.042 U	0.041 U	0.042 U	0.039 U	0.04 U	0.043 U	0.042 U	0.041 U
Toluene	mg/kg	0.088 U	0.098 U	0.086 U	0.086 U	0.081 U	0.082 U	0.083 U	0.084 U	0.084 U	0.088 U	0.084 U	0.082 U	0.084 U	0.078 U	0.079 U	0.086 U	0.083 U	0.082 U
trans-1,2-Dichloroethene	mg/kg	0.044 U	0.049 U	0.043 U	0.043 U	0.04 U	0.041 U	0.041 U	0.042 U	0.042 U	0.044 U	0.042 U	0.041 U	0.042 U	0.039 U	0.04 U	0.043 U	0.042 U	0.041 U
trans-1,3-Dichloropropene	mg/kg	0.044 U	0.049 U	0.043 U	0.043 U	0.04 U	0.041 U	0.041 U	0.042 U	0.042 U	0.044 U	0.042 U	0.041 U	0.042 U	0.039 U	0.04 U	0.043 U	0.042 U	0.041 U
Trichloroethene	mg/kg	0.044 U	0.049 U	0.012 J	0.043 U	0.04 U	0.041 U	0.041 U	0.042 U	0.042 U	0.044 U	0.042 U	0.041 U	0.042 U	0.039 U	0.011 J	0.043 U	0.042 U	0.041 U

TABLE 3.8

PART 201 CRITERIA EXCEEDANCES - SOIL
2013 RFI REPORT
FORMER GENERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation		*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*
Perimeter Status (1)		*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*
Sample Location		*CRA-717I*	*CRA-717I*	*CRA-789M*	*CRA-789M*	*CRA-790M*	*CRA-790M*	*CRA-792M*	*CRA-792M*	*CRA-793SB*	*CRA-793SB*	*CRA-795M*	*CRA-795M*	*CRA-796SB*	*CRA-796SB*	*CRA-796SB*	*CRA-798M*	*CRA-798M*	*CRA-799M*
Sample Identification (SO-17358-)		*031612-DR-076*	*031612-DR-077*	*030612-CB-132*	*030612-CB-133*	*030612-CB-134*	*030612-CB-135*	*030612-CB-136*	*030612-CB-137*	*030612-CB-138*	*030612-CB-139*	*030612-CB-140*	*030612-CB-141*	*030712-CB-142*	*030712-CB-143*	*030712-CB-144*	*030912-CB-179*	*030912-CB-180*	*030912-CB-181*
Sample Date		*3/16/2012*	*3/16/2012*	*3/6/2012*	*3/6/2012*	*3/6/2012*	*3/6/2012*	*3/6/2012*	*3/6/2012*	*3/6/2012*	*3/6/2012*	*3/6/2012*	*3/6/2012*	*3/7/2012*	*3/7/2012*	*3/7/2012*	*3/9/2012*	*3/9/2012*	*3/9/2012*
Sample Depth		*(0-2) ft BGS*	*(2-4) ft BGS*	*(1-3) ft BGS*	*(6-8) ft BGS*	*(1-3) ft BGS*	*(5-7) ft BGS*	*(1-3) ft BGS*	*(5-7) ft BGS*	*(1-3) ft BGS*	*(5-7) ft BGS*	*(1-3) ft BGS*	*(5-7) ft BGS*	*(1-3) ft BGS*	*(1-3) ft BGS*	*(4-6) ft BGS*	*(1-3) ft BGS*	*(5-7) ft BGS*	*(1-3) ft BGS*
Sample Type															*Duplicate*				
	Units																		
VOCs Continued																			
Trichlorofluoromethane (CFC-11)	mg/kg	0.088 U	0.098 U	0.086 U	0.086 U	0.081 U	0.082 U	0.083 U	0.084 U	0.084 U	0.088 U	0.084 U	0.082 U	0.084 U	0.078 U	0.079 U	0.086 U	0.083 U	0.082 U
Trifluorotrichloroethane (Freon 113)	mg/kg	0.22 U	0.24 U	0.22 U	0.22 U	0.2 U	0.2 U	0.21 U	0.21 U	0.21 U	0.22 U	0.21 U	0.21 U	0.21 U	0.19 U	0.2 U	0.22 U	0.21 U	0.21 U
Vinyl chloride	mg/kg	0.035 U	0.039 U	0.034 U	0.035 U	0.032 U	0.033 U	0.033 U	0.034 U	0.034 U	0.035 U	0.033 U	0.033 U	0.034 U	0.031 U	0.032 U	0.034 U	0.033 U	0.033 U
Xylenes (total)	mg/kg	0.13 U	0.15 U	0.13 U	0.13 U	0.12 U	0.12 U	0.12 U	0.13 U	0.13 U	0.13 U	0.13 U	0.12 U	0.13 U	0.12 U	0.12 U	0.13 U	0.12 U	0.12 U
Semi-Volatile Organic Compounds (SVOCs)																			
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	mg/kg	0.29 U	0.28 U	0.28 U	0.27 U	0.28 U	0.28 U	0.29 U	0.28 U	0.29 U	0.28 U	1.4 U	0.28 U	0.28 U	0.28 U	0.28 U	5.6 U	1.1 U	0.28 U
2,4,5-Trichlorophenol	mg/kg	0.29 U	0.28 U	0.28 U	0.27 U	0.28 U	0.28 U	0.29 U	0.28 U	0.29 U	0.28 U	1.4 U	0.28 U	0.28 U	0.28 U	0.28 U	5.6 U	1.1 U	0.28 U
2,4,6-Trichlorophenol	mg/kg	0.29 U	0.28 U	0.28 U	0.27 U	0.28 U	0.28 U	0.29 U	0.28 U	0.29 U	0.28 U	1.4 U	0.28 U	0.28 U	0.28 U	0.28 U	5.6 U	1.1 U	0.28 U
2,4-Dichlorophenol	mg/kg	0.29 U	0.28 U	0.28 U	0.27 U	0.28 U	0.28 U	0.29 U	0.28 U	0.29 U	0.28 U	1.4 U	0.28 U	0.28 U	0.28 U	0.28 U	5.6 U	1.1 U	0.28 U
2,4-Dimethylphenol	mg/kg	0.29 U	0.28 U	0.28 U	0.27 U	0.28 U	0.28 U	0.29 U	0.28 U	0.29 U	0.28 U	1.4 U	0.28 U	0.28 U	0.28 U	0.28 U	5.6 U	1.1 U	0.28 U
2,4-Dinitrophenol	mg/kg	R	0.16 U	0.16 U	0.16 U	0.16 U	R	0.17 U	0.16 U	0.16 U	0.16 U	0.77 U	0.16 U	0.16 U	0.16 U	0.16 U	3.2 U	0.63 U	0.16 U
2,4-Dinitrotoluene	mg/kg	0.29 U	0.28 U	0.28 U	0.27 U	0.28 U	0.28 U	0.29 U	0.28 U	0.29 U	0.28 U	1.4 U	0.28 U	0.28 U	0.28 U	0.28 U	5.6 U	1.1 U	0.28 U
2,6-Dinitrotoluene	mg/kg	0.29 U	0.28 U	0.28 U	0.27 U	0.28 U	0.28 U	0.29 U	0.28 U	0.29 U	0.28 U	1.4 U	0.28 U	0.28 U	0.28 U	0.28 U	5.6 U	1.1 U	0.28 U
2-Chloronaphthalene	mg/kg	0.29 U	0.28 U	0.28 U	0.27 U	0.28 U	0.28 U	0.29 U	0.28 U	0.29 U	0.28 U	1.4 U	0.28 U	0.28 U	0.28 U	0.28 U	5.6 U	1.1 U	0.28 U
2-Chlorophenol	mg/kg	0.29 U	0.28 U	0.28 U	0.27 U	0.28 U	0.28 U	0.29 U	0.28 U	0.29 U	0.28 U	1.4 U	0.28 U	0.28 U	0.28 U	0.28 U	5.6 U	1.1 U	0.28 U
2-Methylnaphthalene	mg/kg	0.29 U	0.28 U	0.0039 J	0.27 U	0.28 U	0.28 U	0.92	0.28 U	0.29 U	0.28 U	1.4 U	0.28 U	0.0046 J	0.0054 J	0.016 J	0.094 J	0.026 J	0.28 U
2-Methylphenol	mg/kg	0.29 U	0.28 U	0.28 U	0.27 U	0.28 U	0.28 U	0.29 U	0.28 U	0.29 U	0.28 U	1.4 U	0.28 U	0.28 U	0.28 U	0.28 U	5.6 U	1.1 U	0.28 U
2-Nitroaniline	mg/kg	0.22 U	0.21 U	0.21 U	0.21 U	0.21 U	0.22 U	0.22 U	0.21 U	0.22 U	0.22 U	1 U	0.21 U	0.21 U	0.21 U	0.21 U	4.3 U	0.84 U	0.21 U
2-Nitrophenol	mg/kg	0.29 U	0.28 U	0.28 U	0.27 U	0.28 U	0.28 U	0.29 U	0.28 U	0.29 U	0.28 U	1.4 U	0.28 U	0.28 U	0.28 U	0.28 U	5.6 U	1.1 U	0.28 U
3&4-Methylphenol	mg/kg	0.29 U	0.28 U	0.28 U	0.27 U	0.28 U	0.28 U	0.29 U	0.28 U	0.29 U	0.28 U	1.4 U	0.28 U	0.28 U	0.28 U	0.28 U	5.6 U	1.1 U	0.28 U
3,3'-Dichlorobenzidine	mg/kg	1.8 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.8 U	1.7 U	1.7 U	1.7 U	8.2 U	1.7 U	1.7 U	1.7 U	1.7 U	34 U	6.7 U	1.7 U
3-Nitroaniline	mg/kg	0.22 U	0.21 U	0.21 U	0.21 U	0.21 U	0.22 U	0.22 U	0.21 U	0.22 U	0.22 U	1 U	0.21 U	0.21 U	0.21 U	0.21 U	4.3 U	0.84 U	0.21 U
4,6-Dinitro-2-methylphenol	mg/kg	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	R	0.17 U	0.16 U	0.16 U	0.16 U	0.77 U	0.16 U	0.16 U	0.16 U	0.16 U	3.2 U	0.63 U	0.16 U
4-Bromophenyl phenyl ether	mg/kg	0.29 U	0.28 U	0.28 U	0.27 U	0.28 U	0.28 U	0.29 U	0.28 U	0.29 U	0.28 U	1.4 U	0.28 U	0.28 U	0.28 U	0.28 U	5.6 U	1.1 U	0.28 U
4-Chloro-3-methylphenol	mg/kg	0.29 U	0.28 U	0.28 U	0.27 U	0.28 U	0.28 U	0.29 U	0.28 U	0.29 U	0.28 U	1.4 U	0.28 U	0.28 U	0.28 U	0.28 U	5.6 U	1.1 U	0.28 U
4-Chloroaniline	mg/kg	0.22 U	0.21 U	0.21 U	0.21 U	0.21 U	0.22 U	0.22 U	0.21 U	0.22 U	0.22 U	1 U	0.21 U	0.21 U	0.21 U	0.21 U	4.3 U	0.84 U	0.21 U
4-Chlorophenyl phenyl ether	mg/kg	0.29 U	0.28 U	0.28 U	0.27 U	0.28 U	0.28 U	0.29 U	0.28 U	0.29 U	0.28 U	1.4 U	0.28 U	0.28 U	0.28 U	0.28 U	5.6 U	1.1 U	0.28 U
4-Nitroaniline	mg/kg	0.22 U	0.21 U	0.21 U	0.21 U	0.21 U	0.22 U	0.22 U	0.21 U	0.22 U	0.22 U	1 U	0.21 U	0.21 U	0.21 U	0.21 U	4.3 U	0.84 U	0.21 U
4-Nitrophenol	mg/kg	0.36 U	0.35 U	0.35 U	0.34 U	0.35 U	0.35 U	0.36 U	0.35 U	0.36 U	0.35 U	1.7 U	0.35 U	0.35 U	0.35 U	0.35 U	7 U	1.4 U	0.34 U
Acenaphthene	mg/kg	0.29 U	0.28 U	0.28 U	0.27 U	0.28 U	0.28 U	0.29 U	0.28 U	0.29 U	0.28 U	1.4 U	0.28 U	0.019 J	0.027 J	0.022 J	1.5 J	0.53 J	0.28 U
Acenaphthylene	mg/kg	0.29 U	0.28 U	0.28 U	0.27 U	0.28 U	0.28 U	0.011 J	0.28 U	0.29 U	0.0052 J	0.14 J	0.28 U	0.0051 J	0.0047 J	0.0071 J	5.6 U	1.1 U	0.0061 J
Acetophenone	mg/kg	0.29 U	0.28 U	0.28 U	0.27 U	0.28 U	0.28 U	0.29 U	0.28 U	0.29 U	0.28 U	1.4 U	0.28 U	0.28 U	0.28 U	0.28 U	5.6 U	1.1 U	0.28 U
Anthracene	mg/kg	0.29 U	0.28 U	0.0091 J	0.27 U	0.007 J	0.28 U	0.025 J	0.0051 J	0.29 U	0.0066 J	0.074 J	0.28 U	0.05 J	0.062 J	0.023 J	1.8 J	0.64 J	0.0066 J
Atrazine	mg/kg	0.044 U	0.043 U	0.042 U	0.042 U	0.043 U	0.043 U	0.044 U	0.042 U	0.044 U	0.043 U	0.21 U	0.043 U	0.042 U	0.043 U	0.042 U	0.85 U	0.17 U	0.042 U
Benzaldehyde	mg/kg	R	R	0.28 U	0.27 U	0.28 U	R	0.048 J	R	R	R	R	R	R	R	R	5.6 U	1.1 U	0.28 U
Benzo(a)anthracene	mg/kg	0.29 U	0.0083 J	0.061 J	0.27 U	0.035 J	0.28 U	0.084 J	0.031 J	0.011 J	0.036 J	0.33 J	0.0075 J	0.16 J	0.15 J	0.074 J	2.7 J	1 J	0.045 J
Benzo(a)pyrene	mg/kg	0.29 U	0.0055 J	0.06 J	0.27 U	0.028 J	0.28 U	0.056 J	0.033 J	0.011 J	0.039 J	0.48 J	0.0083 J	0.15 J	0.15 J	0.085 J	0.95 J	0.33 J	0.057 J
Benzo(b)fluoranthene	mg/kg	0.29 U	0.0086 J	0.088 J	0.27 U	0.038 J	0.28 U	0.099 J	0.049 J	0.017 J	0.051 J	0.62 J	0.0086 J	0.2 J	0.2 J	0.12 J	1.5 J	0.79 J	0.073 J
Benzo(g,h,i)perylene	mg/kg	0.29 U	0.28 U	0.062 J	0.27 U	0.025 J	0.28 U	0.081 J	0.029 J	0.013 J	0.035 J	0.63 J	0.011 J	0.12 J	0.12 J	0.08 J	0.52 J	0.19 J	0.054 J
Benzo(k)fluoranthene	mg/kg	0.29 U	0.28 U	0.041 J	0.27 U	0.024 J	0.28 U	0.031 J	0.021 J	0.0056 J	0.022 J	0.27 J	0.0044 J	0.092 J	0.098 J	0.052 J	0.83 J	0.35 J	0.034 J
Biphenyl (1,1-Biphenyl)	mg/kg	0.29 U	0.28 U	0.28 U	0.27 U	0.28 U	0.28 U	0.071 J	0.28 U	0.29 U	0.28 U	1.4 U	0.28 U	0.28 U	0.28 U	0.28 U	5.6 U	1.1 U	0.28 U
bis(2-Chloroethoxy)methane	mg/kg	0.29 U	0.28 U	0.28 U	0.27 U	0.28 U	0.28 U	0.29 U	0.28 U	0.29 U	0.28 U	1.4 U	0.28 U	0.28 U	0.28 U	0.28 U	5.6 U	1.1 U	0.28 U
bis(2-Chloroethyl)ether	mg/kg	0.088 U	0.086 U	0.084 U	0.083 U	0.085 U	0.086 U	0.088 U	0.084 U	0.087 U	0.086 U	0.41 U	0.086 U	0.084 U	0.085 U	0.084 U	1.7 U	0.33 U	0.083 U
bis(2-Ethylhexyl)phthalate (DEHP)	mg/kg	0.29 U	0.28 U	0.034 J	0.27 U	0.28 U	0.28 U	0.036 J	0.28 U	0.041 J	0.13 J	1.4 U	0.034 J	0.043 J	0.079 J	0.053 J	5.6 U	1.1 U	0.28 U

TABLE 3.8

PART 201 CRITERIA EXCEEDANCES - SOIL
2013 RFI REPORT
FORMER GENERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation		*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*
Perimeter Status (1)		*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*
Sample Location		*CRA-717I*	*CRA-717I*	*CRA-789M*	*CRA-789M*	*CRA-790M*	*CRA-790M*	*CRA-792M*	*CRA-792M*	*CRA-793SB*	*CRA-793SB*	*CRA-795M*	*CRA-795M*	*CRA-796SB*	*CRA-796SB*	*CRA-796SB*	*CRA-798M*	*CRA-798M*	*CRA-799M*
Sample Identification (SO-17358-)		*031612-DR-076*	*031612-DR-077*	*030612-CB-132*	*030612-CB-133*	*030612-CB-134*	*030612-CB-135*	*030612-CB-136*	*030612-CB-137*	*030612-CB-138*	*030612-CB-139*	*030612-CB-140*	*030612-CB-141*	*030712-CB-142*	*030712-CB-143*	*030712-CB-144*	*030912-CB-179*	*030912-CB-180*	*030912-CB-181*
Sample Date		*3/16/2012*	*3/16/2012*	*3/6/2012*	*3/6/2012*	*3/6/2012*	*3/6/2012*	*3/6/2012*	*3/6/2012*	*3/6/2012*	*3/6/2012*	*3/6/2012*	*3/6/2012*	*3/7/2012*	*3/7/2012*	*3/7/2012*	*3/9/2012*	*3/9/2012*	*3/9/2012*
Sample Depth		*(0-2) ft BGS*	*(2-4) ft BGS*	*(1-3) ft BGS*	*(6-8) ft BGS*	*(1-3) ft BGS*	*(5-7) ft BGS*	*(1-3) ft BGS*	*(5-7) ft BGS*	*(1-3) ft BGS*	*(5-7) ft BGS*	*(1-3) ft BGS*	*(5-7) ft BGS*	*(1-3) ft BGS*	*(1-3) ft BGS*	*(4-6) ft BGS*	*(1-3) ft BGS*	*(5-7) ft BGS*	*(1-3) ft BGS*
Sample Type															*Duplicate*				
	Units																		
SVOCs Continued																			
Butyl benzylphthalate (BBP)	mg/kg	0.29 U	0.28 U	0.28 U	0.27 U	0.28 U	0.28 U	0.29 U	0.28 U	0.29 U	0.28 U	1.4 U	0.28 U	0.28 U	0.28 U	0.28 U	5.6 U	1.1 U	0.28 U
Caprolactam	mg/kg	0.29 U	0.28 U	0.28 U	0.27 U	0.28 U	0.28 U	0.29 U	0.28 U	0.29 U	0.28 U	1.4 U	0.28 U	0.28 U	0.28 U	0.28 U	5.6 U	1.1 U	0.28 U
Carbazole	mg/kg	0.29 U	0.28 U	0.28 U	0.27 U	0.28 U	0.28 U	0.29 U	0.28 U	0.29 U	0.28 U	1.4 U	0.28 U	0.028 J	0.035 J	0.28 U	0.91 J	0.28 J	0.28 U
Chrysene	mg/kg	0.0059 J	0.0095 J	0.07 J	0.27 U	0.036 J	0.28 U	0.11 J	0.035 J	0.014 J	0.043 J	0.37 J	0.011 J	0.17 J	0.17 J	0.083 J	2.4 J	1 J	0.053 J
Dibenz(a,h)anthracene	mg/kg	R	0.28 U	0.28 U	0.27 U	0.28 U	0.28 U	0.29 U	0.28 U	0.29 U	0.0085 J	0.089 J	0.28 U	0.032 J	0.025 J	0.015 J	5.6 U	1.1 U	0.28 U
Dibenzofuran	mg/kg	0.29 U	0.28 U	0.28 U	0.27 U	0.28 U	0.28 U	0.21 J	0.28 U	0.29 U	0.28 U	1.4 U	0.28 U	0.01 J	0.018 J	0.04 J	0.95 J	0.33 J	0.28 U
Diethyl phthalate	mg/kg	0.29 U	0.28 U	0.28 U	0.27 U	0.28 U	0.28 U	0.29 U	0.28 U	0.29 U	0.28 U	1.4 U	0.28 U	0.28 U	0.28 U	0.28 U	5.6 U	1.1 U	0.28 U
Dimethyl phthalate	mg/kg	0.29 U	0.28 U	0.28 U	0.27 U	0.28 U	0.28 U	0.29 U	0.28 U	0.29 U	0.28 U	1.4 U	0.28 U	0.28 U	0.28 U	0.28 U	5.6 U	1.1 U	0.28 U
Di-n-butylphthalate (DBP)	mg/kg	0.29 U	0.28 U	0.28 U	0.27 U	0.28 U	0.28 U	0.29 U	0.28 U	0.29 U	0.28 U	1.4 U	0.28 U	0.28 U	0.28 U	0.28 U	5.6 U	1.1 U	0.28 U
Di-n-octyl phthalate (DnOP)	mg/kg	0.29 U	0.28 U	0.28 U	0.27 U	0.28 U	0.28 U	0.29 U	0.28 U	0.29 U	0.28 U	1.4 U	0.28 U	0.28 U	0.28 U	0.28 U	5.6 U	1.1 U	0.28 U
Fluoranthene	mg/kg	0.29 U	0.0075 J	0.13 J	0.27 U	0.066 J	0.28 U	0.13 J	0.053 J	0.017 J	0.067 J	0.52 J	0.018 J	0.33	0.34	0.17 J	**14[d]**	**5.8[d]**	0.074 J
Fluorene	mg/kg	0.29 U	0.28 U	0.28 U	0.27 U	0.28 U	0.28 U	0.29 U	0.28 U	0.29 U	0.28 U	1.4 U	0.28 U	0.015 J	0.02 J	0.0071 J	1.1 J	0.36 J	0.28 U
Hexachlorobenzene	mg/kg	0.29 U	0.28 U	0.28 U	0.27 U	0.28 U	0.28 U	0.29 U	0.28 U	0.29 U	0.28 U	1.4 U	0.28 U	0.28 U	0.28 U	0.28 U	5.6 U	1.1 U	0.28 U
Hexachlorobutadiene	mg/kg	0.044 U	0.043 U	0.042 U	0.042 U	0.043 U	0.043 U	0.044 U	0.042 U	0.044 U	0.043 U	0.21 U	0.043 U	0.042 U	0.043 U	0.042 U	0.85 U	0.17 U	0.042 U
Hexachlorocyclopentadiene	mg/kg	R	0.28 U	0.28 U	0.27 U	0.28 U	0.28 U	0.29 U	0.28 U	0.29 U	0.28 U	1.4 U	0.28 U	0.28 U	0.28 U	0.28 U	5.6 U	1.1 U	0.28 U
Hexachloroethane	mg/kg	0.29 U	0.28 U	0.28 U	0.27 U	0.28 U	0.28 U	0.29 U	0.28 U	0.29 U	0.28 U	1.4 U	0.28 U	0.28 U	0.28 U	0.28 U	5.6 U	1.1 U	0.28 U
Indeno(1,2,3-cd)pyrene	mg/kg	0.29 U	0.28 U	0.047 J	0.27 U	0.017 J	0.28 U	0.039 J	0.022 J	0.0095 J	0.026 J	0.45 J	0.0079 J	0.096 J	0.1 J	0.065 J	0.51 J	0.21 J	0.043 J
Isophorone	mg/kg	0.29 U	0.28 U	0.28 U	0.27 U	0.28 U	0.28 U	0.29 U	0.28 U	0.29 U	0.28 U	1.4 U	0.28 U	0.28 U	0.28 U	0.28 U	5.6 U	1.1 U	0.28 U
Naphthalene	mg/kg	0.29 U	0.28 U	0.28 U	0.27 U	0.28 U	0.28 U	0.6	0.28 U	0.29 U	0.28 U	1.4 U	0.28 U	0.0046 J	0.0083 J	0.014 J	5.6 U	0.017 J	0.28 U
Nitrobenzene	mg/kg	0.29 U	0.28 U	0.28 U	0.27 U	0.28 U	0.28 U	0.29 U	0.28 U	0.29 U	0.28 U	1.4 U	0.28 U	0.28 U	0.28 U	0.28 U	5.6 U	1.1 U	0.28 U
N-Nitrosodi-n-propylamine	mg/kg	0.29 U	0.28 U	0.28 U	0.27 U	0.28 U	0.28 U	0.29 U	0.28 U	0.29 U	0.28 U	1.4 U	0.28 U	0.28 U	0.28 U	0.28 U	5.6 U	1.1 U	0.28 U
N-Nitrosodiphenylamine	mg/kg	0.29 U	0.28 U	0.28 U	0.27 U	0.28 U	0.28 U	0.29 U	0.28 U	0.29 U	0.28 U	1.4 U	0.28 U	0.28 U	0.28 U	0.28 U	5.6 U	1.1 U	0.28 U
Pentachlorophenol	mg/kg	R	0.16 U	0.16 U	0.16 U	0.16 U	R	0.17 U	0.16 U	0.16 U	0.16 U	0.77 U	0.16 U	0.16 U	0.16 U	0.16 U	3.2 U	0.63 U	0.16 U
Phenanthrene	mg/kg	0.29 U	0.28 U	0.041 J	0.27 U	0.025 J	0.28 U	0.41	0.024 J	0.29 U	0.027 J	0.12 J	0.013 J	0.2 J	0.26 J	0.16 J	**6.6[d]**	**2.5[d]**	0.029 J
Phenol	mg/kg	0.29 U	0.28 U	0.28 U	0.27 U	0.28 U	0.28 U	0.29 U	0.28 U	0.29 U	0.28 U	1.4 U	0.28 U	0.28 U	0.28 U	0.28 U	5.6 U	1.1 U	0.28 U
Pyrene	mg/kg	0.29 U	0.01 J	0.1 J	0.27 U	0.054 J	0.0065 J	0.12 J	0.048 J	0.021 J	0.056 J	0.47 J	0.014 J	0.24 J	0.26 J	0.12 J	8.3	3.6	0.068 J
Metals																			
Aluminum	mg/kg	3800	3200	4300	2100	4400	2800	6300	3300	2300	2800	2600	2300	4700	6400	6700	2300	1700	3800
Antimony	mg/kg	0.048 J	0.028 J	0.052 J	0.08 J	0.08 J	0.065 J	0.14 J	0.072 J	0.029 J	0.047 J	0.038 J	0.04 J	0.05 J	0.044 J	0.08 J	0.054 J	0.14 UJ	0.045 J
Arsenic	mg/kg	2.6	2	4.1	5.2	4.1	**16[cd]**	5	**7.2[cd]**	3.1	3.7	2.9	2.9	3.9	4	4.3	2.1	1.8	2.9
Barium	mg/kg	23	15	15	7.9	54	14	51	24	8.2	18	17	12	30	78	80	17	7.2	14
Beryllium	mg/kg	0.17	0.15 U	0.17	0.1 J	0.2	0.11 J	0.78	0.32	0.11 J	0.14 J	0.15 J	0.13 J	0.36 J	0.99 J	1	0.061 J	0.14 U	0.15 U
Cadmium	mg/kg	0.077	0.077 U	0.22	0.24	0.2	0.19	0.29	0.27	0.13	0.18	0.56	0.15	0.22	0.18	0.3	0.088	0.068 J	0.097
Calcium	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chromium	mg/kg	8.9	6.3	10	5.9	9.4	6.7	17	6.3	5.5	16	7.1	9	10	11	31	5.5	6.6	8.2
Chromium III (trivalent)	mg/kg	-	-	9.9	5.5	9	6.4	16	6	5.2	16	7.1	9	-	-	-	5.5	6.6	8.2
Chromium VI (hexavalent)	mg/kg	-	-	0.34 J	0.41 J	0.4 J	0.29 J	0.72 J	0.3 J	0.34 J	0.86 U	0.82 U	0.86 U	-	-	-	0.85 U	0.84 U	0.84 U
Cobalt	mg/kg	2.7	1.9	3.4	3.3	2.9	2.9	5.9	3	2.4	3.1	2.5	2.6	5.2	3.6	3.4	2	2	3.5
Copper	mg/kg	7.1	4.8	11	12	42 J	5.6 J	12 J	12 J	6.9 J	11 J	7 J	8.3 J	19 J	17 J	18 J	5.7	5.1	8.5
Iron	mg/kg	6800	5500	9200	8200	9900	**16000[c]**	11000	11000	5800	7300	5900	6300	9500	7800	9800	5500	4800	7200
Lead	mg/kg	3.9	3.8	6.1	4.2	9.7	3.5	27	4.7	3.8	5	5.3	4	6.6	6.6	9.2	4.3	2.9	6.6
Lead - coarse fraction	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lead - fine fraction	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lead - total (calculated by fine/coarse fraction)	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Magnesium	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

TABLE 3.8

PART 201 CRITERIA EXCEEDANCES - SOIL
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FORMER GENERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation		*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*
Perimeter Status (1)		*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*
Sample Location		*CRA-717I*	*CRA-717I*	*CRA-789M*	*CRA-789M*	*CRA-790M*	*CRA-790M*	*CRA-792M*	*CRA-792M*	*CRA-793SB*	*CRA-793SB*	*CRA-795M*	*CRA-795M*	*CRA-796SB*	*CRA-796SB*	*CRA-796SB*	*CRA-798M*	*CRA-798M*	*CRA-799M*
Sample Identification (SO-17358-)		*031612-DR-076*	*031612-DR-077*	*030612-CB-132*	*030612-CB-133*	*030612-CB-134*	*030612-CB-135*	*030612-CB-136*	*030612-CB-137*	*030612-CB-138*	*030612-CB-139*	*030612-CB-140*	*030612-CB-141*	*030712-CB-142*	*030712-CB-143*	*030712-CB-144*	*030912-CB-179*	*030912-CB-180*	*030912-CB-181*
Sample Date		*3/16/2012*	*3/16/2012*	*3/6/2012*	*3/6/2012*	*3/6/2012*	*3/6/2012*	*3/6/2012*	*3/6/2012*	*3/6/2012*	*3/6/2012*	*3/6/2012*	*3/6/2012*	*3/7/2012*	*3/7/2012*	*3/7/2012*	*3/9/2012*	*3/9/2012*	*3/9/2012*
Sample Depth		*(0-2) ft BGS*	*(2-4) ft BGS*	*(1-3) ft BGS*	*(6-8) ft BGS*	*(1-3) ft BGS*	*(5-7) ft BGS*	*(1-3) ft BGS*	*(5-7) ft BGS*	*(1-3) ft BGS*	*(5-7) ft BGS*	*(1-3) ft BGS*	*(5-7) ft BGS*	*(1-3) ft BGS*	*(1-3) ft BGS*	*(4-6) ft BGS*	*(1-3) ft BGS*	*(5-7) ft BGS*	*(1-3) ft BGS*
Sample Type															*Duplicate*				
	Units																		
Metals Continued																			
Manganese	mg/kg	250	100	200	220	300	290	**630[cd]**	**570[cd]**	150	380	240	180	410	**890[cd]**	**1200[cd]**	250	130	160
Mercury	mg/kg	0.046 U	0.042 U	0.039 J	0.042 U	0.044 U	0.044 U	0.036 J	0.015 J	0.044 U	0.037 U	0.045 U	0.02 J	0.04 U	0.045 U	0.042 U	0.041 U	0.037 U	0.017 J
Nickel	mg/kg	8	5.5	9.5	9	8.6	6.8	13	9.9	5.6	7.8	6.7	7.4	11	8.9	9	5	5.2	8.2
Potassium	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Selenium	mg/kg	0.35	0.21	0.35	0.22	0.37	**0.51[d]**	**1.1[d]**	**0.42[d]**	0.32	0.38	0.34	0.36	**0.47 J[d]**	**0.8 J[d]**	**0.82[d]**	0.26 J	0.23 J	0.29 J
Silver	mg/kg	0.075 U	0.077 U	0.077 U	0.077 U	0.083 U	0.079 U	0.082 U	0.08 U	0.087 U	0.067 J	0.081 U	0.078 U	0.078 U	0.084 U	0.12	0.076 U	0.071 U	0.074 U
Sodium	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Thallium	mg/kg	0.11	0.075 J	0.087	0.1	0.11	0.082	0.13	0.15	0.089	0.24	0.11	0.098	0.15	0.12	0.11	0.076 U	0.071 U	0.078 U
Vanadium	mg/kg	9.2	8.7	13	9.7	12	13	17	11	8.6	9.5	8.4	8.5	14	10	14	7.5	6.9	11
Zinc	mg/kg	15	12	26	21	28	18	44	26	21	24	52	19	26	26	27	24	16	20
Polychlorinated biphenyls (PCBs)																			
Aroclor-1016 (PCB-1016)	mg/kg	0.036 U	0.035 U	0.035 U	0.034 U	0.035 U	0.035 U	0.36 U	0.035 U	0.036 U	0.035 U	0.034 U	0.035 U	0.035 U	0.035 U	0.035 U	0.035 U	0.034 U	0.034 U
Aroclor-1221 (PCB-1221)	mg/kg	0.036 U	0.035 U	0.035 U	0.034 U	0.035 U	0.035 U	0.36 U	0.035 U	0.036 U	0.035 U	0.034 U	0.035 U	0.035 U	0.035 U	0.035 U	0.035 U	0.034 U	0.034 U
Aroclor-1232 (PCB-1232)	mg/kg	0.036 U	0.035 U	0.035 U	0.034 U	0.035 U	0.035 U	0.36 U	0.035 U	0.036 U	0.035 U	0.034 U	0.035 U	0.035 U	0.035 U	0.035 U	0.035 U	0.034 U	0.034 U
Aroclor-1242 (PCB-1242)	mg/kg	0.036 U	0.035 U	0.035 U	0.034 U	0.035 U	0.035 U	0.36 U	0.035 U	0.036 U	0.035 U	0.034 U	0.035 U	0.035 U	0.035 U	0.035 U	0.035 U	0.034 U	0.034 U
Aroclor-1248 (PCB-1248)	mg/kg	0.036 U	0.035 U	0.035 U	0.034 U	0.035 U	0.035 U	0.36 U	0.035 U	0.036 U	0.035 U	0.034 U	0.035 U	0.035 U	0.035 U	0.035 U	0.035 U	0.034 U	0.034 U
Aroclor-1254 (PCB-1254)	mg/kg	0.036 U	0.035 U	0.035 U	0.034 U	0.035 U	0.035 U	0.36 U	0.035 U	0.036 U	0.035 U	0.034 U	0.035 U	0.035 U	0.035 U	0.035 U	0.035 U	0.034 U	0.034 U
Aroclor-1260 (PCB-1260)	mg/kg	0.036 U	0.035 U	0.035 U	0.034 U	0.035 U	0.035 U	2	0.035 U	0.036 U	0.035 U	0.034 U	0.035 U	0.035 U	0.035 U	0.035 U	0.035 U	0.034 U	0.034 U
Aroclor-1262 (PCB-1262)	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Aroclor-1268 (PCB-1268)	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total PCBs	mg/kg	ND	ND	ND	ND	ND	ND	2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Notes

Michigan Part 201 generic clean up criteria (updated September 28, 2012)

ID - Insufficient data to develop criterion

NLV - Hazardous substance is not likely to volatilize under most conditions

NA - Criterion or value is not available

Perimeter Status (1) - N - non-perimeter, Y - perimeter

mg/kg - milligram/kilogram

Notes:

U - Not detected at the associated reporting limit.

J - Estimated concentration.

UJ - Not detected; associated reporting limit is estimated.

R - Rejected

TABLE 3.8

PART 201 CRITERIA EXCEEDANCES - SOIL
2013 RFI REPORT
FORMER GENERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation		*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*
Perimeter Status (1)		*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*
Sample Location		*CRA-799M*	*CRA-800M*	*CRA-800M*	*CRA-801M*	*CRA-801M*	*CRA-802SB*	*CRA-802SB*	*CRA-803M*	*CRA-803M*	*CRA-804M*	*CRA-804M*	*CRA-804M*	*CRA-816SB*	*CRA-816SB*	*CRA-816SB*	*CRA-817SB*	*CRA-817SB*	*CRA-818SB*
Sample Identification (SO-17358-)		*030912-CB-182*	*030912-CB-177*	*030912-CB-178*	*030912-CB-183*	*030912-CB-184*	*030812-CB-163*	*030812-CB-164*	*030512-CB-128*	*030512-CB-129*	*030112-CB-100*	*030112-CB-101*	*030112-CB-102*	*032612-CB-259*	*032612-CB-260*	*032612-CB-261*	*030812-CB-167*	*030812-CB-168*	*030812-CB-169*
Sample Date		*3/9/2012*	*3/9/2012*	*3/9/2012*	*3/9/2012*	*3/9/2012*	*3/8/2012*	*3/8/2012*	*3/5/2012*	*3/5/2012*	*3/1/2012*	*3/1/2012*	*3/1/2012*	*3/26/2012*	*3/26/2012*	*3/26/2012*	*3/8/2012*	*3/8/2012*	*3/8/2012*
Sample Depth		*(5-7) ft BGS*	*(1-3) ft BGS*	*(5-7) ft BGS*	*(1-3) ft BGS*	*(3-5) ft BGS*	*(1-3) ft BGS*	*(6.5-8.5) ft BGS*	*(0.5-2.5) ft BGS*	*(7-9) ft BGS*	*(1-3) ft BGS*	*(1-3) ft BGS*	*(4-6) ft BGS*	*(1-3) ft BGS*	*(4.5-6.5) ft BGS*	*(6.5-8.5) ft BGS*	*(1-3) ft BGS*	*(5.5-7.5) ft BGS*	*(1-3) ft BGS*
Sample Type												*Duplicate*							
	Units																		
Volatile Organic Compounds (VOCs)																			
1,1,1-Trichloroethane	mg/kg	0.045 U	0.041 U	0.046 U	0.04 U	0.047 U	-	-	0.044 U	0.042 U	0.045 U	0.047 U	0.048 U	0.046 U	0.039 U	0.045 U	0.044 U	0.043 U	0.043 U
1,1,2,2-Tetrachloroethane	mg/kg	0.045 U	0.041 U	0.046 U	0.04 U	0.047 U	-	-	0.044 U	0.042 U	0.045 U	0.047 U	0.048 U	0.046 U	0.039 U	0.045 U	0.044 U	0.043 U	0.043 U
1,1,2-Trichloroethane	mg/kg	0.045 U	0.041 U	0.046 U	0.04 U	0.047 U	-	-	0.044 U	0.042 U	0.045 U	0.047 U	0.048 U	0.046 U	0.039 U	0.045 U	0.044 U	0.043 U	0.043 U
1,1-Dichloroethane	mg/kg	0.045 U	0.041 U	0.046 U	0.04 U	0.047 U	-	-	0.044 U	0.042 U	0.045 U	0.047 U	0.048 U	0.046 U	0.039 U	0.045 U	0.044 U	0.043 U	0.099
1,1-Dichloroethene	mg/kg	0.045 U	0.041 U	0.046 U	0.04 U	0.047 U	-	-	0.044 U	0.042 U	0.045 U	0.047 U	0.048 U	0.046 U	0.039 U	0.045 U	0.044 U	0.043 U	0.043 U
1,2,4-Trichlorobenzene	mg/kg	0.22 U	0.21 U	0.23 U	0.2 U	0.24 U	-	-	0.22 U	0.21 U	0.23 U	0.24 U	0.24 U	0.23 U	0.2 U	0.22 U	0.22 U	0.21 U	0.22 U
1,2-Dibromo-3-chloropropane (DBCP)	mg/kg	0.22 U	0.21 U	0.23 U	0.2 U	0.24 U	-	-	0.22 U	0.21 U	0.23 U	0.24 U	0.24 U	0.23 U	0.2 U	0.22 U	0.22 U	0.21 U	0.22 U
1,2-Dibromoethane (Ethylene dibromide)	mg/kg	0.22 U	0.21 U	0.23 U	0.2 U	0.24 U	-	-	0.22 U	0.21 U	0.23 U	0.24 U	0.24 U	0.23 U	0.2 U	0.22 U	0.22 U	0.21 U	0.22 U
1,2-Dichlorobenzene	mg/kg	0.089 U	0.083 U	0.093 U	0.08 U	0.095 U	-	-	0.087 U	0.085 U	0.053 J	0.069 J	0.097 U	0.093 U	0.078 U	0.089 U	0.087 U	0.086 U	0.087 U
1,2-Dichloroethane	mg/kg	0.045 U	0.041 U	0.046 U	0.04 U	0.047 U	-	-	0.044 U	0.042 U	0.045 U	0.047 U	0.048 U	0.046 U	0.039 U	0.045 U	0.044 U	0.043 U	0.043 U
1,2-Dichloropropane	mg/kg	0.045 U	0.041 U	0.046 U	0.04 U	0.047 U	-	-	0.044 U	0.042 U	0.045 U	0.047 U	0.048 U	0.046 U	0.039 U	0.045 U	0.044 U	0.043 U	0.043 U
1,3-Dichlorobenzene	mg/kg	0.089 U	0.083 U	0.093 U	0.08 U	0.095 U	-	-	0.087 U	0.085 U	0.09 U	0.095 U	0.097 U	0.093 U	0.078 U	0.089 U	0.087 U	0.086 U	0.087 U
1,4-Dichlorobenzene	mg/kg	0.089 U	0.083 U	0.093 U	0.08 U	0.095 U	-	-	0.087 U	0.085 U	0.09 U	0.095 U	0.097 U	0.093 U	0.078 U	0.089 U	0.087 U	0.086 U	0.087 U
2-Butanone (Methyl ethyl ketone) (MEK)	mg/kg	0.67 U	0.62 U	0.7 U	0.6 U	0.71 U	-	-	0.65 U	0.64 U	0.68 U	0.71 U	0.72 U	0.7 U	0.59 U	0.67 U	0.65 U	0.64 U	0.65 U
2-Hexanone	mg/kg	2.2 U	2.1 U	2.3 U	2 U	2.4 U	-	-	2.2 U	2.1 U	2.3 U	2.4 U	2.4 U	2.3 U	2 U	2.2 U	2.2 U	2.1 U	2.2 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	mg/kg	2.2 U	2.1 U	2.3 U	2 U	2.4 U	-	-	2.2 U	2.1 U	2.3 U	2.4 U	2.4 U	2.3 U	2 U	2.2 U	2.2 U	2.1 U	2.2 U
Acetone	mg/kg	0.67 U	0.62 U	0.7 U	0.6 U	0.71 U	-	-	0.65 U	0.64 U	0.68 U	0.71 U	0.72 U	0.7 U	0.59 U	0.67 U	0.65 U	0.64 U	0.65 U
Benzene	mg/kg	0.045 U	0.041 U	0.046 U	0.04 U	0.047 U	-	-	0.044 U	0.042 U	0.045 U	0.047 U	0.048 U	0.046 U	0.039 U	0.045 U	0.044 U	0.043 U	0.043 U
Bromodichloromethane	mg/kg	0.089 U	0.083 U	0.093 U	0.08 U	0.095 U	-	-	0.087 U	0.085 U	0.09 U	0.095 U	0.097 U	0.093 U	0.078 U	0.089 U	0.087 U	0.086 U	0.087 U
Bromoform	mg/kg	0.089 U	0.083 U	0.093 U	0.08 U	0.095 U	-	-	0.087 U	0.085 U	0.09 U	0.095 U	0.097 U	0.093 U	0.078 U	0.089 U	0.087 U	0.086 U	0.087 U
Bromomethane (Methyl bromide)	mg/kg	0.22 U	R	0.23 U	0.2 U	0.24 U	-	-	0.22 U	0.21 U	0.23 U	0.24 U	0.24 U	0.23 U	0.2 U	0.22 U	0.22 U	0.21 U	0.22 U
Carbon disulfide	mg/kg	0.22 U	0.21 U	0.23 U	0.2 U	0.24 U	-	-	0.22 U	0.21 U	0.23 U	0.24 U	0.24 U	0.23 U	0.2 U	0.22 U	0.22 U	0.21 U	0.22 U
Carbon tetrachloride	mg/kg	0.045 U	0.041 U	0.046 U	0.04 U	0.047 U	-	-	0.044 U	0.042 U	0.045 U	0.047 U	0.048 U	0.046 U	0.039 U	0.045 U	0.044 U	0.043 U	0.043 U
Chlorobenzene	mg/kg	0.045 U	0.041 U	0.046 U	0.04 U	0.047 U	-	-	0.044 U	0.071	0.045 U	0.047 U	0.048 U	0.046 U	0.039 U	0.045 U	0.044 U	0.043 U	0.043 U
Chloroethane	mg/kg	0.22 U	0.21 U	0.23 U	0.2 U	0.24 U	-	-	0.22 U	0.21 U	0.23 U	0.24 U	0.24 U	0.23 U	0.2 U	0.22 U	0.22 U	0.21 U	0.22 U
Chloroform (Trichloromethane)	mg/kg	0.045 U	0.041 U	0.046 U	0.04 U	0.047 U	-	-	0.044 U	0.042 U	0.045 U	0.047 U	0.048 U	0.046 U	0.039 U	0.045 U	0.044 U	0.043 U	0.043 U
Chloromethane (Methyl chloride)	mg/kg	0.22 U	0.21 U	0.23 U	0.2 U	0.24 U	-	-	0.22 U	0.21 U	0.23 U	0.24 U	0.24 U	0.23 U	0.2 U	0.22 U	0.22 U	0.21 U	0.22 U
cis-1,2-Dichloroethene	mg/kg	0.045 U	0.041 U	0.046 U	0.04 U	0.047 U	-	-	0.044 U	0.028 J	0.041 J	0.083	0.048 U	0.046 U	0.039 U	0.045 U	0.044 U	0.043 U	0.043 U
cis-1,3-Dichloropropene	mg/kg	0.045 U	0.041 U	0.046 U	0.04 U	0.047 U	-	-	0.044 U	0.042 U	0.045 U	0.047 U	0.048 U	0.046 U	0.039 U	0.045 U	0.044 U	0.043 U	0.043 U
Cyclohexane	mg/kg	1.1 U	0.99 U	1.1 U	0.96 U	1.1 U	-	-	1 U	1 U	1.1 U	1.1 U	1.2 U	1.1 U	0.94 U	1.1 U	1 U	1 U	1 U
Dibromochloromethane	mg/kg	0.045 U	0.041 U	0.046 U	0.04 U	0.047 U	-	-	0.044 U	0.042 U	0.045 U	0.047 U	0.048 U	0.046 U	0.039 U	0.045 U	0.044 U	0.043 U	0.043 U
Dichlorodifluoromethane (CFC-12)	mg/kg	0.089 U	0.083 U	0.093 U	0.08 U	0.095 U	-	-	0.087 U	0.085 U	0.09 U	0.095 U	0.097 U	0.093 U	0.078 U	0.089 U	0.087 U	0.086 U	0.087 U
Ethylbenzene	mg/kg	0.045 U	0.041 U	0.046 U	0.04 U	0.047 U	-	-	0.044 U	0.042 U	0.012 J	0.02 J	0.048 U	0.046 U	0.039 U	0.045 U	0.044 U	0.043 U	0.043 U
Isopropyl benzene	mg/kg	0.22 U	0.21 U	0.23 U	0.2 U	0.24 U	-	-	0.22 U	0.21 U	0.23 U	0.24 U	0.24 U	0.23 U	0.2 U	0.22 U	0.22 U	0.21 U	0.22 U
Methyl acetate	mg/kg	1.1 U	0.99 U	1.1 U	0.96 U	1.1 U	-	-	1 U	1 U	1.1 U	1.1 U	1.2 U	1.1 U	0.94 U	1.1 U	1 U	1 U	1 U
Methyl cyclohexane	mg/kg	1.1 U	0.99 U	1.1 U	0.96 U	1.1 U	-	-	1 U	0.014 J	1.1 U	1.1 U	1.2 U	1.1 U	0.94 U	1.1 U	1 U	1 U	1 U
Methyl tert butyl ether (MTBE)	mg/kg	0.22 U	0.21 U	0.23 U	0.2 U	0.24 U	-	-	0.22 U	0.21 U	0.23 U	0.24 U	0.24 U	0.23 U	0.2 U	0.22 U	0.22 U	0.21 U	0.22 U
Methylene chloride	mg/kg	0.22 U	0.21 U	0.23 U	0.2 U	0.24 U	-	-	0.22 U	0.21 U	0.23 U	0.24 U	0.24 U	0.23 U	0.2 U	0.22 U	0.22 U	0.21 U	0.22 U
Styrene	mg/kg	0.045 U	0.041 U	0.046 U	0.04 U	0.047 U	-	-	0.044 U	0.042 U	0.045 U	0.047 U	0.048 U	0.046 U	0.039 U	0.045 U	0.044 U	0.043 U	0.043 U
Tetrachloroethene	mg/kg	0.045 U	0.041 U	0.046 U	0.04 U	0.047 U	-	-	0.044 U	0.042 U	0.045 U	0.047 U	0.048 U	0.046 U	0.015 J	0.045 U	0.044 U	0.066	0.043 U
Toluene	mg/kg	0.089 U	0.083 U	0.093 U	0.08 U	0.095 U	-	-	0.087 U	0.085 U	0.09 U	0.095 U	0.097 U	0.093 U	0.078 U	0.089 U	0.087 U	0.086 U	0.087 U
trans-1,2-Dichloroethene	mg/kg	0.045 U	0.041 U	0.046 U	0.04 U	0.047 U	-	-	0.044 U	0.042 U	0.045 U	0.047 U	0.048 U	0.046 U	0.039 U	0.045 U	0.044 U	0.043 U	0.043 U
trans-1,3-Dichloropropene	mg/kg	0.045 U	0.041 U	0.046 U	0.04 U	0.047 U	-	-	0.044 U	0.042 U	0.045 U	0.047 U	0.048 U	0.046 U	0.039 U	0.045 U	0.044 U	0.043 U	0.043 U
Trichloroethene	mg/kg	0.045 U	0.041 U	0.046 U	0.04 U	0.047 U	-	-	0.044 U	0.042 U	0.045 U	0.013 J	**0.59**[c]	0.046 U	0.039 U	0.045 U	0.044 U	0.043 U	0.043 U

TABLE 3.8

PART 201 CRITERIA EXCEEDANCES - SOIL
2013 RFI REPORT
FORMER GENERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation		*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*
Perimeter Status (1)		*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*
Sample Location		*CRA-799M*	*CRA-800M*	*CRA-800M*	*CRA-801M*	*CRA-801M*	*CRA-802SB*	*CRA-802SB*	*CRA-803M*	*CRA-803M*	*CRA-804M*	*CRA-804M*	*CRA-804M*	*CRA-816SB*	*CRA-816SB*	*CRA-816SB*	*CRA-817SB*	*CRA-817SB*	*CRA-818SB*
Sample Identification (SO-17358-)		*030912-CB-182*	*030912-CB-177*	*030912-CB-178*	*030912-CB-183*	*030912-CB-184*	*030812-CB-163*	*030812-CB-164*	*030512-CB-128*	*030512-CB-129*	*030112-CB-100*	*030112-CB-101*	*030112-CB-102*	*032612-CB-259*	*032612-CB-260*	*032612-CB-261*	*030812-CB-167*	*030812-CB-168*	*030812-CB-169*
Sample Date		*3/9/2012*	*3/9/2012*	*3/9/2012*	*3/9/2012*	*3/9/2012*	*3/8/2012*	*3/8/2012*	*3/5/2012*	*3/5/2012*	*3/1/2012*	*3/1/2012*	*3/1/2012*	*3/26/2012*	*3/26/2012*	*3/26/2012*	*3/8/2012*	*3/8/2012*	*3/8/2012*
Sample Depth		*(5-7) ft BGS*	*(1-3) ft BGS*	*(5-7) ft BGS*	*(1-3) ft BGS*	*(3-5) ft BGS*	*(1-3) ft BGS*	*(6.5-8.5) ft BGS*	*(0.5-2.5) ft BGS*	*(7-9) ft BGS*	*(1-3) ft BGS*	*(1-3) ft BGS*	*(4-6) ft BGS*	*(1-3) ft BGS*	*(4.5-6.5) ft BGS*	*(6.5-8.5) ft BGS*	*(1-3) ft BGS*	*(5.5-7.5) ft BGS*	*(1-3) ft BGS*
Sample Type												*Duplicate*							
	Units																		
VOCs Continued																			
Trichlorofluoromethane (CFC-11)	mg/kg	0.089 U	0.083 U	0.093 U	0.08 U	0.095 U	-	-	0.087 U	0.085 U	0.09 U	0.095 U	0.097 U	0.093 U	0.078 U	0.089 U	0.087 U	0.086 U	0.087 U
Trifluorotrichloroethane (Freon 113)	mg/kg	0.22 U	0.21 U	0.23 U	0.2 U	0.24 U	-	-	0.22 U	0.21 U	0.23 U	0.24 U	0.24 U	0.23 U	0.2 U	0.22 U	0.22 U	0.21 U	0.22 U
Vinyl chloride	mg/kg	0.036 U	0.033 U	0.037 U	0.032 U	0.038 U	-	-	0.035 U	0.034 U	0.036 U	0.038 U	0.039 U	0.037 U	0.031 U	0.036 U	0.035 U	0.034 U	0.035 U
Xylenes (total)	mg/kg	0.13 U	0.12 U	0.14 U	0.12 U	0.14 U	-	-	0.13 U	0.13 U	0.057 J	0.095 J	0.14 U	0.14 U	0.023 J	0.13 U	0.13 U	0.046 J	0.13 U
Semi-Volatile Organic Compounds (SVOCs)																			
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	mg/kg	0.3 U	14 U	29 U	0.28 U	0.31 U	-	-	0.3 U	27 U	3.2 U	0.32 U	0.28 U	3 U	5.7 U	13 U	0.29 U	14 U	14 U
2,4,5-Trichlorophenol	mg/kg	0.3 U	14 U	29 U	0.28 U	0.31 U	-	-	0.3 U	27 U	3.2 U	0.32 U	0.28 U	3 U	5.7 U	13 U	0.29 U	14 U	14 U
2,4,6-Trichlorophenol	mg/kg	0.3 U	14 U	29 U	0.28 U	0.31 U	-	-	0.3 U	27 U	3.2 U	0.32 U	0.28 U	3 U	5.7 U	13 U	0.29 U	14 U	14 U
2,4-Dichlorophenol	mg/kg	0.3 U	14 U	29 U	0.28 U	0.31 U	-	-	0.3 U	27 U	3.2 U	0.32 U	0.28 U	3 U	5.7 U	13 U	0.29 U	14 U	14 U
2,4-Dimethylphenol	mg/kg	0.3 U	14 U	29 U	0.28 U	0.31 U	-	-	0.3 U	27 U	3.2 U	0.32 U	0.28 U	3 U	5.7 U	13 U	0.29 U	14 U	14 U
2,4-Dinitrophenol	mg/kg	0.17 U	8.1 U	16 U	0.16 U	0.18 U	-	-	0.17 U	15 U	1.8 U	0.18 U	0.16 U	1.7 U	3.3 U	7.6 U	0.16 U	8.1 U	8.2 U
2,4-Dinitrotoluene	mg/kg	0.3 U	14 U	29 U	0.28 U	0.31 U	-	-	0.3 U	27 U	3.2 U	0.32 U	0.28 U	3 U	5.7 U	13 U	0.29 U	14 U	14 U
2,6-Dinitrotoluene	mg/kg	0.3 U	14 U	29 U	0.28 U	0.31 U	-	-	0.3 U	27 U	3.2 U	0.32 U	0.28 U	3 U	5.7 U	13 U	0.29 U	14 U	14 U
2-Chloronaphthalene	mg/kg	0.3 U	14 U	29 U	0.28 U	0.31 U	-	-	0.3 U	27 U	3.2 U	0.32 U	0.28 U	3 U	5.7 U	13 U	0.29 U	14 U	14 U
2-Chlorophenol	mg/kg	0.3 U	14 U	29 U	0.28 U	0.31 U	-	-	0.3 U	27 U	3.2 U	0.32 U	0.28 U	3 U	5.7 U	13 U	0.29 U	14 U	14 U
2-Methylnaphthalene	mg/kg	0.3 U	14 U	1.4 J	0.28 U	0.31 U	-	-	0.0052 J	27 U	0.092 J	0.068 J	0.28 U	3 U	1.1 J	0.32 J	0.0099 J	0.91 J	14 U
2-Methylphenol	mg/kg	0.3 U	14 U	29 U	0.28 U	0.31 U	-	-	0.3 U	27 U	3.2 U	0.32 U	0.28 U	3 U	5.7 U	13 U	0.29 U	14 U	14 U
2-Nitroaniline	mg/kg	0.22 U	11 U	22 U	0.21 U	0.24 U	-	-	0.23 U	20 U	2.4 U	0.24 U	0.21 U	2.3 U	4.3 U	10 U	0.22 U	11 U	11 U
2-Nitrophenol	mg/kg	0.3 U	14 U	29 U	0.28 U	0.31 U	-	-	0.3 U	27 U	3.2 U	0.32 U	0.28 U	3 U	5.7 U	13 U	0.29 U	14 U	14 U
3&4-Methylphenol	mg/kg	0.3 U	14 U	29 U	0.28 U	0.31 U	-	-	0.3 U	27 U	3.2 U	0.32 U	0.28 U	3 U	5.7 U	13 U	0.29 U	14 U	14 U
3,3'-Dichlorobenzidine	mg/kg	1.8 U	86 U	170 U	1.7 U	1.9 U	-	-	1.8 U	160 U	19 U	1.9 U	1.7 U	18 U	35 U	81 U	1.7 U	86 U	87 U
3-Nitroaniline	mg/kg	0.22 U	11 U	22 U	0.21 U	0.24 U	-	-	0.23 U	20 U	2.4 U	0.24 U	0.21 U	2.3 U	4.3 U	10 U	0.22 U	11 U	11 U
4,6-Dinitro-2-methylphenol	mg/kg	0.17 U	8.1 U	16 U	0.16 U	0.18 U	-	-	0.17 U	15 U	1.8 U	0.18 U	0.16 U	1.7 U	3.3 U	7.6 U	0.16 U	8.1 U	8.2 U
4-Bromophenyl phenyl ether	mg/kg	0.3 U	14 U	29 U	0.28 U	0.31 U	-	-	0.3 U	27 U	3.2 U	0.32 U	0.28 U	3 U	5.7 U	13 U	0.29 U	14 U	14 U
4-Chloro-3-methylphenol	mg/kg	0.3 U	14 U	29 U	0.28 U	0.31 U	-	-	0.3 U	27 U	3.2 U	0.32 U	0.28 U	3 U	5.7 U	13 U	0.29 U	14 U	14 U
4-Chloroaniline	mg/kg	0.22 U	11 U	22 U	0.21 U	0.24 U	-	-	0.23 U	20 U	2.4 U	0.24 U	0.21 U	2.3 U	4.3 U	10 U	0.22 U	11 U	11 U
4-Chlorophenyl phenyl ether	mg/kg	0.3 U	14 U	29 U	0.28 U	0.31 U	-	-	0.3 U	27 U	3.2 U	0.32 U	0.28 U	3 U	5.7 U	13 U	0.29 U	14 U	14 U
4-Nitroaniline	mg/kg	0.22 U	11 U	22 U	0.21 U	0.24 U	-	-	0.23 U	20 U	2.4 U	0.24 U	0.21 U	2.3 U	4.3 U	10 U	0.22 U	11 U	11 U
4-Nitrophenol	mg/kg	0.37 U	18 U	36 U	0.35 U	0.39 U	-	-	0.38 U	34 U	4 U	0.4 U	0.34 U	3.7 U	7.2 U	17 U	0.36 U	18 U	18 U
Acenaphthene	mg/kg	0.3 U	14 U	0.98 J	0.28 U	0.31 U	-	-	0.01 J	0.36 J	0.12 J	0.095 J	0.28 U	0.15 J	3.8 J	1.3 J	0.048 J	0.56 J	0.86 J
Acenaphthylene	mg/kg	0.3 U	14 U	29 U	0.28 U	0.31 U	-	-	0.015 J	27 U	3.2 U	0.32 U	0.28 U	3 U	5.7 U	13 U	0.29 U	14 U	14 U
Acetophenone	mg/kg	0.3 U	14 U	29 U	0.28 U	0.31 U	-	-	0.3 U	27 U	3.2 U	0.32 U	0.28 U	3 U	5.7 U	13 U	0.29 U	14 U	14 U
Anthracene	mg/kg	0.3 U	14 U	0.8 J	0.0051 J	0.31 U	-	-	0.036 J	0.57 J	0.18 J	0.14 J	0.28 U	0.16 J	3.3 J	1.2 J	0.29 U	14 U	1.2 J
Atrazine	mg/kg	0.045 U	2.2 U	4.3 U	0.042 U	0.047 U	-	-	0.046 U	4.1 U	0.48 U	0.049 U	0.042 U	0.45 U	0.87 U	2 U	0.044 U	2.2 U	2.2 U
Benzaldehyde	mg/kg	0.3 U	14 U	29 U	0.28 U	0.31 U	-	-	0.3 U	27 U	3.2 U	0.32 U	0.28 U	3 U	5.7 U	13 U	0.29 U	14 U	14 U
Benzo(a)anthracene	mg/kg	0.3 U	14 U	0.47 J	0.013 J	0.31 U	-	-	0.18 J	27 U	0.24 J	0.16 J	0.0061 J	0.35 J	4.7 J	1.4 J	0.3	0.72 J	1.6 J
Benzo(a)pyrene	mg/kg	0.3 U	14 U	29 U	0.01 J	0.31 U	-	-	0.25 J	27 U	0.16 J	0.1 J	0.0038 J	0.14 J	1.5 J	0.52 J	0.27 J	0.48 J	1.2 J
Benzo(b)fluoranthene	mg/kg	0.3 U	14 U	0.94 J	0.017 J	0.31 U	-	-	0.36	27 U	0.24 J	0.16 J	0.0053 J	0.31 J	3 J	1.6 J	0.3	1 J	1.3 J
Benzo(g,h,i)perylene	mg/kg	0.3 U	14 U	29 U	0.011 J	0.31 U	-	-	0.27 J	27 U	0.085 J	0.054 J	0.0049 J	0.11 J	0.83 J	13 U	0.18 J	0.29 J	0.73 J
Benzo(k)fluoranthene	mg/kg	0.3 U	14 U	29 U	0.0065 J	0.31 U	-	-	0.13 J	27 U	0.13 J	0.078 J	0.28 U	0.16 J	1.7 J	0.49 J	0.15 J	0.28 J	0.76 J
Biphenyl (1,1-Biphenyl)	mg/kg	0.3 U	14 U	29 U	0.28 U	0.31 U	-	-	0.3 U	27 U	3.2 U	0.32 U	0.28 U	3 U	5.7 U	13 U	0.29 U	14 U	14 U
bis(2-Chloroethoxy)methane	mg/kg	0.3 U	14 U	29 U	0.28 U	0.31 U	-	-	0.3 U	27 U	3.2 U	0.32 U	0.28 U	3 U	5.7 U	13 U	0.29 U	14 U	14 U
bis(2-Chloroethyl)ether	mg/kg	0.09 U	4.3 U	8.7 U	0.085 U	0.095 U	-	-	0.091 U	8.2 U	0.96 U	0.097 U	0.084 U	0.9 U	1.7 U	4.1 U	0.087 U	4.3 U	4.4 U
bis(2-Ethylhexyl)phthalate (DEHP)	mg/kg	0.3 U	14 U	29 U	0.91	0.31 U	-	-	0.3 U	27 U	3.2 U	0.32 U	0.28 U	8.2	2.9 J	1.1 J	0.29 U	14 U	14 U

TABLE 3.8

PART 201 CRITERIA EXCEEDANCES - SOIL
2013 RFI REPORT
FORMER GENERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation		CENTRAL01	CENTRAL01	CENTRAL01	CENTRAL01	CENTRAL01	CENTRAL01	CENTRAL01	CENTRAL01	CENTRAL01	CENTRAL01	CENTRAL01	CENTRAL01	CENTRAL01	CENTRAL01	CENTRAL01	CENTRAL01	CENTRAL01	CENTRAL01
Perimeter Status (1)		N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Sample Location		CRA-799M	CRA-800M	CRA-800M	CRA-801M	CRA-801M	CRA-802SB	CRA-802SB	CRA-803M	CRA-803M	CRA-804M	CRA-804M	CRA-804M	CRA-816SB	CRA-816SB	CRA-816SB	CRA-817SB	CRA-817SB	CRA-818SB
Sample Identification (SO-17358-)		030912-CB-182	030912-CB-177	030912-CB-178	030912-CB-183	030912-CB-184	030812-CB-163	030812-CB-164	030512-CB-128	030512-CB-129	030112-CB-100	030112-CB-101	030112-CB-102	032612-CB-259	032612-CB-260	032612-CB-261	030812-CB-167	030812-CB-168	030812-CB-169
Sample Date		3/9/2012	3/9/2012	3/9/2012	3/9/2012	3/9/2012	3/8/2012	3/8/2012	3/5/2012	3/5/2012	3/1/2012	3/1/2012	3/1/2012	3/26/2012	3/26/2012	3/26/2012	3/8/2012	3/8/2012	3/8/2012
Sample Depth		(5-7) ft BGS	(1-3) ft BGS	(5-7) ft BGS	(1-3) ft BGS	(3-5) ft BGS	(1-3) ft BGS	(6.5-8.5) ft BGS	(0.5-2.5) ft BGS	(7-9) ft BGS	(1-3) ft BGS	(1-3) ft BGS	(4-6) ft BGS	(1-3) ft BGS	(4.5-6.5) ft BGS	(6.5-8.5) ft BGS	(1-3) ft BGS	(5.5-7.5) ft BGS	(1-3) ft BGS
Sample Type												Duplicate							
	Units																		
SVOCs Continued																			
Butyl benzylphthalate (BBP)	mg/kg	0.3 U	14 U	29 U	0.28 U	0.31 U	-	-	0.3 U	27 U	3.2 U	0.32 U	0.28 U	0.19 J	0.88 J	13 U	0.29 U	14 U	14 U
Caprolactam	mg/kg	0.3 U	14 U	29 U	0.28 U	0.31 U	-	-	0.3 U	27 U	3.2 U	0.32 U	0.28 U	3 U	5.7 U	13 U	0.29 U	14 U	14 U
Carbazole	mg/kg	0.3 U	14 U	29 U	0.28 U	0.31 U	-	-	0.038 J	27 U	3.2 U	0.058 J	0.28 U	3 U	5.7 U	13 U	0.29 U	14 U	14 U
Chrysene	mg/kg	0.3 U	0.22 J	29 U	0.019 J	0.31 U	-	-	0.19 J	27 U	0.27 J	0.19 J	0.0071 J	0.35 J	4.5 J	1.3 J	0.31	0.87 J	1.5 J
Dibenz(a,h)anthracene	mg/kg	0.3 U	14 U	29 U	0.28 U	0.31 U	-	-	0.3 U	27 U	3.2 U	0.32 U	0.28 U	3 U	5.7 U	13 U	0.29 U	14 U	14 U
Dibenzofuran	mg/kg	0.3 U	14 U	29 U	0.28 U	0.31 U	-	-	0.013 J	0.37 J	0.17 J	0.12 J	0.28 U	0.1 J	**3.3 J[d]**	1.2 J	0.045 J	14 U	0.68 J
Diethyl phthalate	mg/kg	0.3 U	14 U	29 U	0.28 U	0.31 U	-	-	0.3 U	27 U	3.2 U	0.32 U	0.28 U	3 U	5.7 U	13 U	0.29 U	14 U	14 U
Dimethyl phthalate	mg/kg	0.3 U	14 U	29 U	0.28 U	0.31 U	-	-	0.3 U	27 U	3.2 U	0.32 U	0.28 U	3 U	5.7 U	13 U	0.29 U	14 U	14 U
Di-n-butylphthalate (DBP)	mg/kg	0.3 U	14 U	29 U	0.28 U	0.31 U	-	-	0.3 U	27 U	3.2 U	0.32 U	0.28 U	3 U	0.9 J	13 U	0.29 U	14 U	14 U
Di-n-octyl phthalate (DnOP)	mg/kg	0.3 U	14 U	29 U	0.28 U	0.31 U	-	-	0.3 U	27 U	3.2 U	0.32 U	0.28 U	3 U	5.7 U	13 U	0.29 U	14 U	14 U
Fluoranthene	mg/kg	0.3 U	0.69 J	1.6 J	0.049 J	0.31 U	-	-	0.35	1 J	0.78 J	0.63	0.014 J	1.4 J	**26[d]**	**6.8 J[d]**	0.85	2.2 J	5.2 J
Fluorene	mg/kg	0.3 U	14 U	1.6 J	0.28 U	0.31 U	-	-	0.014 J	0.6 J	0.2 J	0.15 J	0.28 U	0.16 J	**7.3[d]**	2.3 J	0.11 J	1 J	0.95 J
Hexachlorobenzene	mg/kg	0.3 U	14 U	29 U	0.28 U	0.31 U	-	-	0.3 U	27 U	3.2 U	0.32 U	0.28 U	3 U	5.7 U	13 U	0.29 U	14 U	14 U
Hexachlorobutadiene	mg/kg	0.045 U	2.2 U	4.3 U	0.042 U	0.047 U	-	-	0.046 U	4.1 U	0.48 U	0.049 U	0.042 U	0.45 U	0.87 U	2 U	0.044 U	2.2 U	2.2 U
Hexachlorocyclopentadiene	mg/kg	0.3 U	14 U	29 U	0.28 U	0.31 U	-	-	0.3 U	27 U	3.2 U	0.32 U	0.28 U	3 U	5.7 U	13 U	0.29 U	14 U	14 U
Hexachloroethane	mg/kg	0.3 U	14 U	29 U	0.28 U	0.31 U	-	-	0.3 U	27 U	3.2 U	0.32 U	0.28 U	3 U	5.7 U	13 U	0.29 U	14 U	14 U
Indeno(1,2,3-cd)pyrene	mg/kg	0.3 U	14 U	29 U	0.0082 J	0.31 U	-	-	0.21 J	27 U	0.083 J	0.047 J	0.28 U	0.094 J	0.74 J	0.25 J	0.14 J	0.64 J	0.56 J
Isophorone	mg/kg	0.3 U	14 U	29 U	0.28 U	0.31 U	-	-	0.3 U	27 U	3.2 U	0.32 U	0.28 U	3 U	5.7 U	13 U	0.29 U	14 U	14 U
Naphthalene	mg/kg	0.3 U	14 U	29 U	0.28 U	0.31 U	-	-	0.0059 J	0.37 J	0.33 J	0.22 J	0.0059 J	3 U	**0.81 J[d]**	0.23 J	0.007 J	0.39 J	0.62 J
Nitrobenzene	mg/kg	0.3 U	14 U	29 U	0.28 U	0.31 U	-	-	0.3 U	27 U	3.2 U	0.32 U	0.28 U	3 U	5.7 U	13 U	0.29 U	14 U	14 U
N-Nitrosodi-n-propylamine	mg/kg	0.3 U	14 U	29 U	0.28 U	0.31 U	-	-	0.3 U	27 U	3.2 U	0.32 U	0.28 U	3 U	5.7 U	13 U	0.29 U	14 U	14 U
N-Nitrosodiphenylamine	mg/kg	0.3 U	14 U	29 U	0.28 U	0.31 U	-	-	0.3 U	27 U	3.2 U	0.32 U	0.28 U	3 U	5.7 U	13 U	0.29 U	14 U	14 U
Pentachlorophenol	mg/kg	0.17 U	8.1 U	16 U	0.16 U	0.18 U	-	-	0.17 U	15 U	1.8 U	0.18 U	0.16 U	1.7 U	3.3 U	7.6 U	0.16 U	8.1 U	8.2 U
Phenanthrene	mg/kg	0.3 U	1.1 J	**4.8 J[d]**	0.046 J	0.31 U	-	-	0.16 J	**2.6 J[d]**	1 J	0.88	0.015 J	0.5 J	**28[d]**	**8.3 J[d]**	0.79	**4.5 J[d]**	**5 J[d]**
Phenol	mg/kg	0.3 U	14 U	29 U	0.28 U	0.31 U	-	-	0.3 U	27 U	3.2 U	0.32 U	0.28 U	3 U	5.7 U	13 U	0.29 U	14 U	14 U
Pyrene	mg/kg	0.3 U	0.75 J	1.3 J	0.038 J	0.31 U	-	-	0.28 J	2 J	0.54 J	0.39	0.013 J	0.9 J	15	4.4 J	0.69	2 J	3.7 J
Metals																			
Aluminum	mg/kg	2500	3600	1300	2300	**7000[c]**	-	-	4200	1300	6700	**7000[c]**	1400	2600	2700	1800	4000	3300	3900
Antimony	mg/kg	0.049 J	0.039 J	0.038 J	0.045 J	0.053 J	-	-	0.065 J	0.11 J	0.044 J	0.03 J	0.027 J	0.06 J	0.045 J	0.056 J	0.044 J	0.021 J	0.036 J
Arsenic	mg/kg	2.7	3	1.3	2.2	4.3	-	-	2.7	2.5	5.4	4.1	0.93	4.1	3.2	3.3	3.9	3.2	4.7
Barium	mg/kg	10	19	4.5	10	29	-	-	25	11	42	40	6.3	16	10	6.3	22	18	21
Beryllium	mg/kg	0.15 U	0.17 U	0.15 U	0.16 U	0.16	-	-	0.2	0.05 J	0.27	0.26	0.062 J	0.15 J	0.14	0.11 J	0.17 U	0.14 U	0.16 U
Cadmium	mg/kg	0.084	0.13	0.099	0.083	0.073	-	-	0.24	0.11	0.28	0.23	0.082	0.12	0.089	0.065	0.13	0.11	0.13
Calcium	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chromium	mg/kg	10	7.8	3.4	5	12	-	-	8.2	4.3	13	12	4.2	5.9	7.2	4.9	8.1	7	8.9
Chromium III (trivalent)	mg/kg	9.7	7.8	3.4	5	12	-	-	7.6	4.3	13	12	4.2	-	-	-	-	-	-
Chromium VI (hexavalent)	mg/kg	0.36 J	0.86 U	0.86 U	0.85 U	0.95 U	-	-	0.59 J	0.82 U	0.96 UJ	0.96 UJ	0.84 UJ	-	-	-	-	-	-
Cobalt	mg/kg	3	3	1.9	2.4	5.5	-	-	2.5	2	3.5	3	1.6	3.4	2.9	2.4	3.6	3	3.6
Copper	mg/kg	7.9	6.7	4.5	5.9	15	-	-	9.7	5.1	6.5	5.1	4.5	13	9	8.8	9.4	7.7	11
Iron	mg/kg	7000	7400	3900	5300	11000	-	-	7000	3300	**13000[c]**	12000	2800	7200	6800	5900	9300	7800	8900
Lead	mg/kg	4	5.3	2.7	4	8.1	-	-	9.1	2	7.1	7.3	1.7	4.8	6.6	4.7	7.2	4.4	5.8
Lead - coarse fraction	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lead - fine fraction	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lead - total (calculated by fine/coarse fraction)	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Magnesium	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

TABLE 3.8

PART 201 CRITERIA EXCEEDANCES - SOIL
2013 RFI REPORT
FORMER GENERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation		*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*
Perimeter Status (1)		*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*
Sample Location		*CRA-799M*	*CRA-800M*	*CRA-800M*	*CRA-801M*	*CRA-801M*	*CRA-802SB*	*CRA-802SB*	*CRA-803M*	*CRA-803M*	*CRA-804M*	*CRA-804M*	*CRA-804M*	*CRA-816SB*	*CRA-816SB*	*CRA-816SB*	*CRA-817SB*	*CRA-817SB*	*CRA-818SB*
Sample Identification (SO-17358-)		*030912-CB-182*	*030912-CB-177*	*030912-CB-178*	*030912-CB-183*	*030912-CB-184*	*030812-CB-163*	*030812-CB-164*	*030512-CB-128*	*030512-CB-129*	*030112-CB-100*	*030112-CB-101*	*030112-CB-102*	*032612-CB-259*	*032612-CB-260*	*032612-CB-261*	*030812-CB-167*	*030812-CB-168*	*030812-CB-169*
Sample Date		*3/9/2012*	*3/9/2012*	*3/9/2012*	*3/9/2012*	*3/9/2012*	*3/8/2012*	*3/8/2012*	*3/5/2012*	*3/5/2012*	*3/1/2012*	*3/1/2012*	*3/1/2012*	*3/26/2012*	*3/26/2012*	*3/26/2012*	*3/8/2012*	*3/8/2012*	*3/8/2012*
Sample Depth		*(5-7) ft BGS*	*(1-3) ft BGS*	*(5-7) ft BGS*	*(1-3) ft BGS*	*(3-5) ft BGS*	*(1-3) ft BGS*	*(6.5-8.5) ft BGS*	*(0.5-2.5) ft BGS*	*(7-9) ft BGS*	*(1-3) ft BGS*	*(1-3) ft BGS*	*(4-6) ft BGS*	*(1-3) ft BGS*	*(4.5-6.5) ft BGS*	*(6.5-8.5) ft BGS*	*(1-3) ft BGS*	*(5.5-7.5) ft BGS*	*(1-3) ft BGS*
Sample Type												*Duplicate*							
	Units																		
Metals Continued																			
Manganese	mg/kg	160	220	95	160	99	-	-	150	87	150	120	72	220 J	300 J	160 J	210	230	220
Mercury	mg/kg	0.045 U	0.023 J	0.045 U	0.045 U	0.041 U	-	-	0.021 J	0.037 U	0.038 J	0.05	0.039 U	0.044 U	0.023 J	0.042 U	0.018 J	0.039 U	0.048 U
Nickel	mg/kg	7.6	7.7	4.9	6.2	14	-	-	7.1	5.4	8.1	7.7	5.3	8.2	9.8	7.1	8.4	8.3	9.6
Potassium	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Selenium	mg/kg	0.23 J	0.36 J	0.2 J	0.3 J	**0.45 J**[d]	-	-	0.34	0.22	**0.52**[d]	**0.46**[d]	0.21	0.28 J	0.26 J	0.2 J	**0.43 J**[d]	0.26 J	0.36 J
Silver	mg/kg	0.077 U	0.084 U	0.076 U	0.08 U	0.037 J	-	-	0.084 U	0.077 U	0.026 J	0.024 J	0.073 U	0.084 U	0.066 U	0.058 U	0.083 U	0.069 U	0.078 U
Sodium	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Thallium	mg/kg	0.1 U	0.084 U	0.076 U	0.096 U	0.23 U	-	-	0.069 J	0.077	0.094 U	0.089 U	0.077 U	0.15	0.066 U	0.084 U	0.16 U	0.12 U	0.11 U
Vanadium	mg/kg	10	12	6.3	8	17	-	-	12	5.5	17	17	6.3	10	9.7	7.5	13	10	13
Zinc	mg/kg	20	58	12	18	45	-	-	20	11	36	34	12	27	19	17	21	17	22
Polychlorinated biphenyls (PCBs)																			
Aroclor-1016 (PCB-1016)	mg/kg	0.037 U	0.036 U	0.035 U	0.035 U	0.039 U	0.038 U	0.035 U	0.037 U	0.17 U	0.04 U	0.04 U	0.034 U	0.037 U	0.18 U	0.17 U	0.036 U	0.035 U	0.036 U
Aroclor-1221 (PCB-1221)	mg/kg	0.037 U	0.036 U	0.035 U	0.035 U	0.039 U	0.038 U	0.035 U	0.037 U	0.17 U	0.04 U	0.04 U	0.034 U	0.037 U	0.18 U	0.17 U	0.036 U	0.035 U	0.036 U
Aroclor-1232 (PCB-1232)	mg/kg	0.037 U	0.036 U	0.035 U	0.035 U	0.039 U	0.038 U	0.035 U	0.037 U	0.17 U	0.04 U	0.04 U	0.034 U	0.037 U	0.18 U	0.17 U	0.036 U	0.035 U	0.036 U
Aroclor-1242 (PCB-1242)	mg/kg	0.037 U	0.036 U	0.035 U	0.035 U	0.039 U	0.038 U	0.035 U	0.037 U	0.17 U	0.04 U	0.04 U	0.034 U	0.037 U	0.18 U	0.17 U	0.036 U	0.019 J	0.036 U
Aroclor-1248 (PCB-1248)	mg/kg	0.037 U	0.036 U	0.035 U	0.035 U	0.039 U	0.038 U	0.035 U	0.037 U	0.17 U	0.04 U	0.04 U	0.034 U	0.037 U	0.18 U	0.17 U	0.036 U	0.035 U	0.036 U
Aroclor-1254 (PCB-1254)	mg/kg	0.037 U	0.036 U	0.035 U	0.035 U	0.039 U	0.038 U	0.035 U	0.037 U	0.17 U	0.04 U	0.04 U	0.034 U	0.037 U	0.18 U	0.17 U	0.036 U	0.035 U	0.036 U
Aroclor-1260 (PCB-1260)	mg/kg	0.037 U	0.036 U	0.035 U	0.035 U	0.039 U	0.11	0.035 U	0.037 U	0.17 U	0.04 U	0.04 U	0.034 U	0.037 U	0.18 U	0.17 U	0.028 J	0.071	0.036 U
Aroclor-1262 (PCB-1262)	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	0.037 U	0.18 U	0.17 U	-	-	-
Aroclor-1268 (PCB-1268)	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	0.044 J	0.18 U	0.17 U	-	-	-
Total PCBs	mg/kg	ND	ND	ND	ND	ND	0.11	ND	ND	ND	ND	ND	ND	0.044 J	ND	ND	0.028 J	0.09 J	ND

Notes

Michigan Part 201 generic clean up criteria (updated September 28, 2012)

ID - Insufficient data to develop criterion

NLV - Hazardous substance is not likely to volatilize under most conditions

NA - Criterion or value is not available

Perimeter Status (1) - N - non-perimeter, Y - perimeter

mg/kg - milligram/kilogram

Notes:

U - Not detected at the associated reporting limit.

J - Estimated concentration.

UJ - Not detected; associated reporting limit is estimated.

R - Rejected

TABLE 3.8

PART 201 CRITERIA EXCEEDANCES - SOIL
2013 RFI REPORT
FORMER GENERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation		*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL02*	*CENTRAL02*	*CENTRAL02*	*CENTRAL02*	*CENTRAL02*	*CENTRAL02*	*CENTRAL02*
Perimeter Status (1)		*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*
Sample Location		*CRA-818SB*	*CRA-818SB*	*CRA-819SB*	*CRA-819SB*	*CRA-819SB*	*CRA-830SB*	*CRA-830SB*	*CRA-831SB*	*CRA-831SB*	*CRA-832SB*	*CRA-832SB*	*CRA-791M*	*CRA-791M*	*CRA-805M*	*CRA-805M*	*CRA-808M*	*CRA-808M*	*CRA-808M*
Sample Identification (SO-17358-)		*030812-CB-170*	*030812-CB-171*	*030812-CB-172*	*030812-CB-173*	*030812-CB-174*	*032612-CB-262*	*032612-CB-263*	*030812-CB-165*	*030812-CB-166*	*032612-CB-264*	*032612-CB-265*	*032212-CB-230*	*032212-CB-231*	*030212-CB-113*	*030212-CB-114*	*030512-CB-123*	*030512-CB-124*	*030512-CB-125*
Sample Date		*3/8/2012*	*3/8/2012*	*3/8/2012*	*3/8/2012*	*3/8/2012*	*3/26/2012*	*3/26/2012*	*3/8/2012*	*3/8/2012*	*3/26/2012*	*3/26/2012*	*3/22/2012*	*3/22/2012*	*3/2/2012*	*3/2/2012*	*3/5/2012*	*3/5/2012*	*3/5/2012*
Sample Depth		*(7-9) ft BGS*	*(7-9) ft BGS*	*(1-3) ft BGS*	*(3-5) ft BGS*	*(6.5-8.5) ft BGS*	*(1-3) ft BGS*	*(6.5-8.5) ft BGS*	*(1-3) ft BGS*	*(6.5-8.5) ft BGS*	*(0.5-2.5) ft BGS*	*(6.5-8.5) ft BGS*	*(0.5-2.5) ft BGS*	*(4-6) ft BGS*	*(0.5-2.5) ft BGS*	*(6.5-8.5) ft BGS*	*(1-3) ft BGS*	*(1-3) ft BGS*	*(5.5-7.5) ft BGS*
Sample Type			*Duplicate*															*Duplicate*	
	Units																		
Volatile Organic Compounds (VOCs)																			
1,1,1-Trichloroethane	mg/kg	0.66	0.43	0.043 U	0.04 U	0.041 U	0.045 U	0.047 U	-	-	-	-	0.043 U	0.04 U	0.046 U	0.041 U	0.053 U	0.044 U	0.043 U
1,1,2,2-Tetrachloroethane	mg/kg	0.012 J	0.043 U	0.043 U	0.04 U	0.041 U	0.045 U	0.047 U	-	-	-	-	0.043 U	0.04 U	0.046 U	0.041 U	0.053 U	0.044 U	0.043 U
1,1,2-Trichloroethane	mg/kg	0.043 U	0.043 U	0.043 U	0.04 U	0.041 U	0.045 U	0.047 U	-	-	-	-	0.043 U	0.04 U	0.046 U	0.041 U	0.053 U	0.044 U	0.043 U
1,1-Dichloroethane	mg/kg	2.9	1.9	0.043 U	0.04 U	0.041 U	0.045 U	0.047 U	-	-	-	-	0.043 U	0.04 U	0.046 U	0.041 U	0.053 U	0.044 U	0.043 U
1,1-Dichloroethene	mg/kg	0.076	0.048	0.043 U	0.04 U	0.041 U	0.045 U	0.047 U	-	-	-	-	0.043 U	0.04 U	0.046 U	0.041 U	0.053 U	0.044 U	0.043 U
1,2,4-Trichlorobenzene	mg/kg	0.21 U	0.21 U	0.22 U	0.2 U	0.21 U	0.22 U	0.23 U	-	-	-	-	0.22 U	0.2 U	0.23 U	0.018 J	0.27 U	0.22 U	0.21 U
1,2-Dibromo-3-chloropropane (DBCP)	mg/kg	0.21 U	0.21 U	0.22 U	0.2 U	0.21 U	0.22 U	0.23 U	-	-	-	-	0.22 U	0.2 U	0.23 U	0.21 U	0.27 U	0.22 U	0.21 U
1,2-Dibromoethane (Ethylene dibromide)	mg/kg	0.21 U	0.21 U	0.22 U	0.2 U	0.21 U	0.22 U	0.23 U	-	-	-	-	0.22 U	0.2 U	0.23 U	0.21 U	0.27 U	0.22 U	0.21 U
1,2-Dichlorobenzene	mg/kg	0.085 U	0.085 U	0.086 U	0.08 U	0.082 U	0.09 U	0.094 U	-	-	-	-	0.086 U	0.08 U	0.091 U	0.083 U	0.11 U	0.087 U	0.086 U
1,2-Dichloroethane	mg/kg	0.043 U	0.043 U	0.043 U	0.04 U	0.041 U	0.045 U	0.047 U	-	-	-	-	0.043 U	0.04 U	0.046 U	0.041 U	0.053 U	0.044 U	0.043 U
1,2-Dichloropropane	mg/kg	0.043 U	0.043 U	0.043 U	0.04 U	0.041 U	0.045 U	0.047 U	-	-	-	-	0.043 U	0.04 U	0.046 U	0.041 U	0.053 U	0.044 U	0.043 U
1,3-Dichlorobenzene	mg/kg	0.085 U	0.085 U	0.086 U	0.08 U	0.082 U	0.09 U	0.094 U	-	-	-	-	0.086 U	0.08 U	0.091 U	0.083 U	0.11 U	0.087 U	0.086 U
1,4-Dichlorobenzene	mg/kg	0.085 U	0.085 U	0.086 U	0.08 U	0.082 U	0.09 U	0.094 U	-	-	-	-	0.086 U	0.08 U	0.091 U	0.083 U	0.11 U	0.087 U	0.086 U
2-Butanone (Methyl ethyl ketone) (MEK)	mg/kg	0.64 U	0.64 U	0.65 U	0.6 U	0.62 U	0.67 U	0.7 U	-	-	-	-	0.65 U	0.6 U	0.68 U	0.62 U	0.8 U	0.65 U	0.64 U
2-Hexanone	mg/kg	2.1 U	2.1 U	2.2 U	2 U	2.1 U	2.2 U	2.3 U	-	-	-	-	2.2 U	2 U	2.3 U	2.1 U	2.7 U	2.2 U	2.1 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	mg/kg	2.1 U	2.1 U	2.2 U	2 U	2.1 U	2.2 U	2.3 U	-	-	-	-	2.2 U	2 U	2.3 U	2.1 U	2.7 U	2.2 U	2.1 U
Acetone	mg/kg	0.64 U	0.64 U	0.65 U	0.6 U	0.62 U	0.67 U	0.7 U	-	-	-	-	0.65 U	0.6 U	0.68 U	0.62 U	0.8 U	0.65 U	0.64 U
Benzene	mg/kg	0.043 U	0.043 U	0.043 U	0.04 U	0.041 U	0.045 U	0.047 U	-	-	-	-	0.043 U	0.04 U	0.046 U	0.041 U	0.053 U	0.044 U	0.043 U
Bromodichloromethane	mg/kg	0.085 U	0.085 U	0.086 U	0.08 U	0.082 U	0.09 U	0.094 U	-	-	-	-	0.086 U	0.08 U	0.091 U	0.083 U	0.11 U	0.087 U	0.086 U
Bromoform	mg/kg	0.085 U	0.085 U	0.086 U	0.08 U	0.082 U	0.09 U	0.094 U	-	-	-	-	0.086 U	0.08 U	0.091 U	0.083 U	0.11 U	0.087 U	0.086 U
Bromomethane (Methyl bromide)	mg/kg	0.21 U	0.21 U	0.22 U	0.2 U	0.21 U	0.22 U	0.23 U	-	-	-	-	0.22 U	0.2 U	0.23 U	0.21 U	0.27 U	0.22 U	0.21 U
Carbon disulfide	mg/kg	0.21 U	0.21 U	0.22 U	0.014 J	0.21 U	0.22 U	0.23 U	-	-	-	-	0.22 U	0.2 U	0.23 U	0.21 U	0.27 U	0.22 U	0.21 U
Carbon tetrachloride	mg/kg	0.043 U	0.043 U	0.043 U	0.04 U	0.041 U	0.045 U	0.047 U	-	-	-	-	0.043 U	0.04 U	0.046 U	0.041 U	0.053 U	0.044 U	0.043 U
Chlorobenzene	mg/kg	0.043 U	0.043 U	0.043 U	0.04 U	0.041 U	0.045 U	0.047 U	-	-	-	-	0.043 U	0.04 U	0.046 U	0.041 U	0.053 U	0.044 U	0.043 U
Chloroethane	mg/kg	0.11 J	0.072 J	0.22 U	0.2 U	0.21 U	0.22 U	0.23 U	-	-	-	-	0.22 U	0.2 U	0.23 U	0.21 U	0.27 U	0.22 U	0.21 U
Chloroform (Trichloromethane)	mg/kg	0.043 U	0.043 U	0.043 U	0.04 U	0.041 U	0.045 U	0.047 U	-	-	-	-	0.043 U	0.04 U	0.046 U	0.041 U	0.053 U	0.044 U	0.043 U
Chloromethane (Methyl chloride)	mg/kg	0.21 U	0.21 U	0.22 U	0.2 U	0.21 U	0.22 U	0.23 U	-	-	-	-	0.22 U	0.2 U	0.23 U	0.21 U	0.27 U	0.22 U	0.21 U
cis-1,2-Dichloroethene	mg/kg	0.043 U	0.043 U	0.043 U	0.04 U	0.041 U	0.045 U	0.047 U	-	-	-	-	0.043 U	0.04 U	0.046 U	0.041 U	0.053 U	0.044 U	0.043 U
cis-1,3-Dichloropropene	mg/kg	0.043 U	0.043 U	0.043 U	0.04 U	0.041 U	0.045 U	0.047 U	-	-	-	-	0.043 U	0.04 U	0.046 U	0.041 U	0.053 U	0.044 U	0.043 U
Cyclohexane	mg/kg	1 U	1 U	1 U	0.96 U	0.98 U	1.1 U	1.1 U	-	-	-	-	1 U	0.96 U	1.1 U	0.99 U	1.3 U	1 U	1 U
Dibromochloromethane	mg/kg	0.043 U	0.043 U	0.043 U	0.04 U	0.041 U	0.045 U	0.047 U	-	-	-	-	0.043 U	0.04 U	0.046 U	0.041 U	0.053 U	0.044 U	0.043 U
Dichlorodifluoromethane (CFC-12)	mg/kg	0.085 U	0.085 U	0.086 U	0.08 U	0.082 U	0.09 U	0.094 U	-	-	-	-	0.086 U	0.08 U	0.091 U	0.083 U	0.11 U	0.087 U	0.086 U
Ethylbenzene	mg/kg	0.043 U	0.043 U	0.043 U	0.018 J	0.015 J	0.045 U	0.032 J	-	-	-	-	0.043 U	0.04 U	0.046 U	0.041 U	0.053 U	0.044 U	0.043 U
Isopropyl benzene	mg/kg	0.21 U	0.21 U	0.22 U	0.2 U	0.21 U	0.22 U	0.23 U	-	-	-	-	0.22 U	0.2 U	0.23 U	0.21 U	0.27 U	0.22 U	0.21 U
Methyl acetate	mg/kg	1 U	1 U	1 U	0.071 J	0.98 U	1.1 U	1.1 U	-	-	-	-	1 U	0.96 U	1.1 U	0.99 U	0.34 J	0.2 J	1 U
Methyl cyclohexane	mg/kg	1 U	1 U	1 U	0.96 U	0.98 U	1.1 U	0.027 J	-	-	-	-	1 U	0.96 U	1.1 U	0.02 J	1.3 U	1 U	1 U
Methyl tert butyl ether (MTBE)	mg/kg	0.21 U	0.21 U	0.22 U	0.2 U	0.21 U	0.22 U	0.23 U	-	-	-	-	0.22 U	0.2 U	0.23 U	0.21 U	0.27 U	0.22 U	0.21 U
Methylene chloride	mg/kg	0.21 U	0.21 U	0.22 U	0.2 U	0.21 U	0.22 U	0.23 U	-	-	-	-	0.22 U	0.2 U	0.23 U	0.21 U	0.27 U	0.22 U	0.21 U
Styrene	mg/kg	0.043 U	0.043 U	0.043 U	0.04 U	0.041 U	0.045 U	0.047 U	-	-	-	-	0.043 U	0.04 U	0.046 U	0.041 U	0.053 U	0.044 U	0.043 U
Tetrachloroethene	mg/kg	0.043 U	0.043 U	0.043 U	0.026 J	0.031 J	0.045 U	0.047 U	-	-	-	-	0.043 U	0.04 U	0.046 U	0.041 U	0.053 U	0.044 U	0.017 J
Toluene	mg/kg	0.085 U	0.085 U	0.086 U	0.022 J	0.019 J	0.09 U	0.039 J	-	-	-	-	0.086 U	0.08 U	0.091 U	0.083 U	0.11 U	0.087 U	0.086 U
trans-1,2-Dichloroethene	mg/kg	0.043 U	0.043 U	0.043 U	0.04 U	0.041 U	0.045 U	0.047 U	-	-	-	-	0.043 U	0.04 U	0.046 U	0.041 U	0.053 U	0.044 U	0.043 U
trans-1,3-Dichloropropene	mg/kg	0.043 U	0.043 U	0.043 U	0.04 U	0.041 U	0.045 U	0.047 U	-	-	-	-	0.043 U	0.04 U	0.046 U	0.041 U	0.053 U	0.044 U	0.043 U
Trichloroethene	mg/kg	0.043 U	0.043 U	0.043 U	0.04 U	0.041 U	0.045 U	0.047 U	-	-	-	-	0.043 U	0.04 U	0.046 U	0.041 U	0.053 U	0.044 U	0.043 U

TABLE 3.8

PART 201 CRITERIA EXCEEDANCES - SOIL
2013 RFI REPORT
FORMER GENERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation		*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL02*	*CENTRAL02*	*CENTRAL02*	*CENTRAL02*	*CENTRAL02*	*CENTRAL02*	*CENTRAL02*
Perimeter Status (1)		*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*
Sample Location		*CRA-818SB*	*CRA-818SB*	*CRA-819SB*	*CRA-819SB*	*CRA-819SB*	*CRA-830SB*	*CRA-830SB*	*CRA-831SB*	*CRA-831SB*	*CRA-832SB*	*CRA-832SB*	*CRA-791M*	*CRA-791M*	*CRA-805M*	*CRA-805M*	*CRA-808M*	*CRA-808M*	*CRA-808M*
Sample Identification (SO-17358-)		*030812-CB-170*	*030812-CB-171*	*030812-CB-172*	*030812-CB-173*	*030812-CB-174*	*032612-CB-262*	*032612-CB-263*	*030812-CB-165*	*030812-CB-166*	*032612-CB-264*	*032612-CB-265*	*032212-CB-230*	*032212-CB-231*	*030212-CB-113*	*030212-CB-114*	*030512-CB-123*	*030512-CB-124*	*030512-CB-125*
Sample Date		*3/8/2012*	*3/8/2012*	*3/8/2012*	*3/8/2012*	*3/8/2012*	*3/26/2012*	*3/26/2012*	*3/8/2012*	*3/8/2012*	*3/26/2012*	*3/26/2012*	*3/22/2012*	*3/22/2012*	*3/2/2012*	*3/2/2012*	*3/5/2012*	*3/5/2012*	*3/5/2012*
Sample Depth		*(7-9) ft BGS*	*(7-9) ft BGS*	*(1-3) ft BGS*	*(3-5) ft BGS*	*(6.5-8.5) ft BGS*	*(1-3) ft BGS*	*(6.5-8.5) ft BGS*	*(1-3) ft BGS*	*(6.5-8.5) ft BGS*	*(0.5-2.5) ft BGS*	*(6.5-8.5) ft BGS*	*(0.5-2.5) ft BGS*	*(4-6) ft BGS*	*(0.5-2.5) ft BGS*	*(6.5-8.5) ft BGS*	*(1-3) ft BGS*	*(1-3) ft BGS*	*(5.5-7.5) ft BGS*
Sample Type			*Duplicate*															*Duplicate*	
	Units																		
VOCs Continued																			
Trichlorofluoromethane (CFC-11)	mg/kg	0.085 U	0.085 U	0.086 U	0.08 U	0.082 U	0.09 U	0.094 U	-	-	-	-	0.086 U	0.08 U	0.091 U	0.083 U	0.11 U	0.087 U	0.086 U
Trifluorotrichloroethane (Freon 113)	mg/kg	0.21 U	0.21 U	0.22 U	0.2 U	0.21 U	0.22 U	0.23 U	-	-	-	-	0.22 U	0.2 U	0.23 U	0.21 U	0.27 U	0.22 U	0.21 U
Vinyl chloride	mg/kg	0.034 U	0.034 U	0.035 U	0.032 U	0.033 U	0.036 U	0.038 U	-	-	-	-	0.034 U	0.032 U	0.036 U	0.033 U	0.043 U	0.035 U	0.034 U
Xylenes (total)	mg/kg	0.13 U	0.13 U	0.13 U	0.062 J	0.062 J	0.13 U	0.18	-	-	-	-	0.13 U	0.12 U	0.14 U	0.12 U	0.16 U	0.13 U	0.13 U
Semi-Volatile Organic Compounds (SVOCs)																			
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	mg/kg	0.27 U	0.27 U	0.28 U	14 U	27 U	5.8 U	5.4 U	-	-	-	-	0.28 U	0.29 U	0.28 U	0.27 U	0.3 U	0.29 U	0.27 U
2,4,5-Trichlorophenol	mg/kg	0.27 U	0.27 U	0.28 U	14 U	27 U	5.8 U	5.4 U	-	-	-	-	0.28 U	0.29 U	0.28 U	0.27 U	0.3 U	0.29 U	0.27 U
2,4,6-Trichlorophenol	mg/kg	0.27 U	0.27 U	0.28 U	14 U	27 U	5.8 U	5.4 U	-	-	-	-	0.28 U	0.29 U	0.28 U	0.27 U	0.3 U	0.29 U	0.27 U
2,4-Dichlorophenol	mg/kg	0.27 U	0.27 U	0.28 U	14 U	27 U	5.8 U	5.4 U	-	-	-	-	0.28 U	0.29 U	0.28 U	0.27 U	0.3 U	0.29 U	0.27 U
2,4-Dimethylphenol	mg/kg	0.27 U	0.27 U	0.28 U	14 U	27 U	5.8 U	5.4 U	-	-	-	-	0.28 U	0.29 U	0.28 U	0.27 U	0.3 U	0.29 U	0.27 U
2,4-Dinitrophenol	mg/kg	0.16 U	0.15 U	0.16 U	7.8 U	15 U	3.3 U	3.1 U	-	-	-	-	0.16 U	0.16 U	0.16 U	0.16 U	0.17 U	0.17 U	0.15 U
2,4-Dinitrotoluene	mg/kg	0.27 U	0.27 U	0.28 U	14 U	27 U	5.8 U	5.4 U	-	-	-	-	0.28 U	0.29 U	0.28 U	0.27 U	0.3 U	0.29 U	0.27 U
2,6-Dinitrotoluene	mg/kg	0.27 U	0.27 U	0.28 U	14 U	27 U	5.8 U	5.4 U	-	-	-	-	0.28 U	0.29 U	0.28 U	0.27 U	0.3 U	0.29 U	0.27 U
2-Chloronaphthalene	mg/kg	0.27 U	0.27 U	0.28 U	14 U	27 U	5.8 U	5.4 U	-	-	-	-	0.28 U	0.29 U	0.28 U	0.27 U	0.3 U	0.29 U	0.27 U
2-Chlorophenol	mg/kg	0.27 U	0.27 U	0.28 U	14 U	27 U	5.8 U	5.4 U	-	-	-	-	0.28 U	0.29 U	0.28 U	0.27 U	0.3 U	0.29 U	0.27 U
2-Methylnaphthalene	mg/kg	0.21 J	0.24 J	0.018 J	0.21 J	27 U	5.8 U	1.5 J	-	-	-	-	0.28 U	0.29 U	0.28 U	0.0038 J	0.3 U	0.29 U	0.27 U
2-Methylphenol	mg/kg	0.27 U	0.27 U	0.28 U	14 U	27 U	5.8 U	5.4 U	-	-	-	-	0.28 U	0.29 U	0.28 U	0.27 U	0.3 U	0.29 U	0.27 U
2-Nitroaniline	mg/kg	0.21 U	0.21 U	0.22 U	10 U	20 U	4.4 U	4.1 U	-	-	-	-	0.21 U	0.22 U	0.21 U	0.21 U	0.22 U	0.22 U	0.21 U
2-Nitrophenol	mg/kg	0.27 U	0.27 U	0.28 U	14 U	27 U	5.8 U	5.4 U	-	-	-	-	0.28 U	0.29 U	0.28 U	0.27 U	0.3 U	0.29 U	0.27 U
3&4-Methylphenol	mg/kg	0.27 U	0.27 U	0.28 U	14 U	27 U	5.8 U	5.4 U	-	-	-	-	0.28 U	0.29 U	0.28 U	0.27 U	0.3 U	0.29 U	0.27 U
3,3'-Dichlorobenzidine	mg/kg	1.7 U	1.6 U	1.7 U	83 U	160 U	35 U	33 U	-	-	-	-	1.7 U	1.7 U	1.7 U	1.7 U	1.8 U	1.8 U	1.6 U
3-Nitroaniline	mg/kg	0.21 U	0.21 U	0.22 U	10 U	20 U	4.4 U	4.1 U	-	-	-	-	0.21 U	0.22 U	0.21 U	0.21 U	0.22 U	0.22 U	0.21 U
4,6-Dinitro-2-methylphenol	mg/kg	0.16 U	0.15 U	0.16 U	7.8 U	15 U	3.3 U	3.1 U	-	-	-	-	0.16 U	0.16 U	0.16 U	0.16 U	0.17 U	0.17 U	0.15 U
4-Bromophenyl phenyl ether	mg/kg	0.27 U	0.27 U	0.28 U	14 U	27 U	5.8 U	5.4 U	-	-	-	-	0.28 U	0.29 U	0.28 U	0.27 U	0.3 U	0.29 U	0.27 U
4-Chloro-3-methylphenol	mg/kg	0.27 U	0.27 U	0.28 U	14 U	27 U	5.8 U	5.4 U	-	-	-	-	0.28 U	0.29 U	0.28 U	0.27 U	0.3 U	0.29 U	0.27 U
4-Chloroaniline	mg/kg	0.21 U	0.21 U	0.22 U	10 U	20 U	4.4 U	4.1 U	-	-	-	-	0.21 U	0.22 U	0.21 U	0.21 U	0.22 U	0.22 U	0.21 U
4-Chlorophenyl phenyl ether	mg/kg	0.27 U	0.27 U	0.28 U	14 U	27 U	5.8 U	5.4 U	-	-	-	-	0.28 U	0.29 U	0.28 U	0.27 U	0.3 U	0.29 U	0.27 U
4-Nitroaniline	mg/kg	0.21 U	0.21 U	0.22 U	10 U	20 U	4.4 U	4.1 U	-	-	-	-	0.21 U	0.22 U	0.21 U	0.21 U	0.22 U	0.22 U	0.21 U
4-Nitrophenol	mg/kg	0.34 U	0.34 U	0.35 U	17 U	34 U	7.3 U	6.8 U	-	-	-	-	0.35 U	0.36 U	0.34 U	0.34 U	0.37 U	0.36 U	0.34 U
Acenaphthene	mg/kg	0.076 J	0.09 J	0.28 U	0.23 J	27 U	0.16 J	0.8 J	-	-	-	-	0.0065 J	0.29 U	0.28 U	0.27 U	0.3 U	0.29 U	0.27 U
Acenaphthylene	mg/kg	0.27 U	0.27 U	0.28 U	14 U	27 U	5.8 U	5.4 U	-	-	-	-	0.28 U	0.29 U	0.28 U	0.27 U	0.3 U	0.29 U	0.27 U
Acetophenone	mg/kg	0.27 U	0.27 U	0.28 U	14 U	27 U	5.8 U	5.4 U	-	-	-	-	0.28 U	0.29 U	0.28 U	0.27 U	0.3 U	0.29 U	0.27 U
Anthracene	mg/kg	0.033 J	0.044 J	0.28 U	14 U	27 U	0.54 J	0.81 J	-	-	-	-	0.023 J	0.29 U	0.28 U	0.27 U	0.0075 J	0.0065 J	0.27 U
Atrazine	mg/kg	0.041 U	0.041 U	0.043 U	2.1 U	4.1 U	0.88 U	0.82 U	-	-	-	-	0.042 U	0.044 U	0.042 U	0.042 U	0.045 U	0.044 U	0.041 U
Benzaldehyde	mg/kg	0.27 U	0.27 U	0.28 U	14 U	27 U	5.8 U	5.4 U	-	-	-	-	0.28 U	0.29 U	0.28 U	0.27 U	0.3 U	0.29 U	0.27 U
Benzo(a)anthracene	mg/kg	0.017 J	0.018 J	0.28 U	0.75 J	27 U	1.2 J	0.25 J	-	-	-	-	0.12 J	0.29 U	0.05 J	0.27 U	0.029 J	0.022 J	0.27 U
Benzo(a)pyrene	mg/kg	0.0091 J	0.011 J	0.0036 J	0.44 J	27 U	1 J	0.1 J	-	-	-	-	0.11 J	0.29 U	0.031 J	0.27 U	0.023 J	0.019 J	0.27 U
Benzo(b)fluoranthene	mg/kg	0.014 J	0.014 J	0.0046 J	0.56 J	27 U	1.2 J	5.4 U	-	-	-	-	0.16 J	0.29 U	0.095 J	0.27 U	0.038 J	0.029 J	0.27 U
Benzo(g,h,i)perylene	mg/kg	0.0098 J	0.01 J	0.0039 J	0.3 J	27 U	0.6 J	5.4 U	-	-	-	-	0.077 J	0.29 U	0.038 J	0.27 U	0.022 J	0.017 J	0.27 U
Benzo(k)fluoranthene	mg/kg	0.0068 J	0.0067 J	0.28 U	14 U	27 U	0.52 J	5.4 U	-	-	-	-	0.058 J	0.29 U	0.04 J	0.27 U	0.018 J	0.015 J	0.27 U
Biphenyl (1,1-Biphenyl)	mg/kg	0.21 J	0.24 J	0.28 U	14 U	27 U	5.8 U	1.2 J	-	-	-	-	0.28 U	0.29 U	0.28 U	0.27 U	0.3 U	0.29 U	0.27 U
bis(2-Chloroethoxy)methane	mg/kg	0.27 U	0.27 U	0.28 U	14 U	27 U	5.8 U	5.4 U	-	-	-	-	0.28 U	0.29 U	0.28 U	0.27 U	0.3 U	0.29 U	0.27 U
bis(2-Chloroethyl)ether	mg/kg	0.083 U	0.082 U	0.086 U	4.1 U	8.1 U	1.8 U	1.6 U	-	-	-	-	0.084 U	0.087 U	0.083 U	0.083 U	0.09 U	0.088 U	0.082 U
bis(2-Ethylhexyl)phthalate (DEHP)	mg/kg	0.27 U	0.27 U	0.28 U	14 U	2.2 J	5.8 U	0.59 J	-	-	-	-	0.28 U	0.29 U	0.28 U	0.04 J	0.029 J	0.023 J	0.27 U

TABLE 3.8

PART 201 CRITERIA EXCEEDANCES - SOIL
2013 RFI REPORT
FORMER GENERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation		*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL02*	*CENTRAL02*	*CENTRAL02*	*CENTRAL02*	*CENTRAL02*	*CENTRAL02*	*CENTRAL02*
Perimeter Status (1)		*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*
Sample Location		*CRA-818SB*	*CRA-818SB*	*CRA-819SB*	*CRA-819SB*	*CRA-819SB*	*CRA-830SB*	*CRA-830SB*	*CRA-831SB*	*CRA-831SB*	*CRA-832SB*	*CRA-832SB*	*CRA-791M*	*CRA-791M*	*CRA-805M*	*CRA-805M*	*CRA-808M*	*CRA-808M*	*CRA-808M*
Sample Identification (SO-17358-)		*030812-CB-170*	*030812-CB-171*	*030812-CB-172*	*030812-CB-173*	*030812-CB-174*	*032612-CB-262*	*032612-CB-263*	*030812-CB-165*	*030812-CB-166*	*032612-CB-264*	*032612-CB-265*	*032212-CB-230*	*032212-CB-231*	*030212-CB-113*	*030212-CB-114*	*030512-CB-123*	*030512-CB-124*	*030512-CB-125*
Sample Date		*3/8/2012*	*3/8/2012*	*3/8/2012*	*3/8/2012*	*3/8/2012*	*3/26/2012*	*3/26/2012*	*3/8/2012*	*3/8/2012*	*3/26/2012*	*3/26/2012*	*3/22/2012*	*3/22/2012*	*3/2/2012*	*3/2/2012*	*3/5/2012*	*3/5/2012*	*3/5/2012*
Sample Depth		*(7-9) ft BGS*	*(7-9) ft BGS*	*(1-3) ft BGS*	*(3-5) ft BGS*	*(6.5-8.5) ft BGS*	*(1-3) ft BGS*	*(6.5-8.5) ft BGS*	*(1-3) ft BGS*	*(6.5-8.5) ft BGS*	*(0.5-2.5) ft BGS*	*(6.5-8.5) ft BGS*	*(0.5-2.5) ft BGS*	*(4-6) ft BGS*	*(0.5-2.5) ft BGS*	*(6.5-8.5) ft BGS*	*(1-3) ft BGS*	*(1-3) ft BGS*	*(5.5-7.5) ft BGS*
Sample Type			*Duplicate*															*Duplicate*	
	Units																		
SVOCs Continued																			
Butyl benzylphthalate (BBP)	mg/kg	0.27 U	0.27 U	0.28 U	14 U	27 U	5.8 U	5.4 U	-	-	-	-	0.28 U	0.29 U	0.28 U	0.27 U	0.3 U	0.29 U	0.27 U
Caprolactam	mg/kg	0.27 U	0.27 U	0.28 U	14 U	27 U	5.8 U	5.4 U	-	-	-	-	0.28 U	0.29 U	0.28 U	0.27 U	0.3 U	0.29 U	0.27 U
Carbazole	mg/kg	0.27 U	0.27 U	0.28 U	14 U	27 U	5.8 U	5.4 U	-	-	-	-	0.28 U	0.29 U	0.28 U	0.27 U	0.3 U	0.29 U	0.27 U
Chrysene	mg/kg	0.026 J	0.031 J	0.28 U	0.91 J	27 U	1.2 J	0.26 J	-	-	-	-	0.13 J	0.29 U	0.057 J	0.27 U	0.035 J	0.028 J	0.27 U
Dibenz(a,h)anthracene	mg/kg	0.27 U	0.27 U	0.28 U	14 U	27 U	5.8 U	5.4 U	-	-	-	-	0.018 J	0.29 U	0.28 U	0.27 U	0.3 U	0.29 U	0.27 U
Dibenzofuran	mg/kg	0.056 J	0.074 J	0.0058 J	14 U	27 U	0.13 J	5.4 U	-	-	-	-	0.28 U	0.29 U	0.28 U	0.27 U	0.3 U	0.29 U	0.27 U
Diethyl phthalate	mg/kg	0.27 U	0.27 U	0.28 U	14 U	27 U	5.8 U	5.4 U	-	-	-	-	0.28 U	0.29 U	0.28 U	0.27 U	0.3 U	0.29 U	0.27 U
Dimethyl phthalate	mg/kg	0.27 U	0.27 U	0.28 U	14 U	27 U	5.8 U	5.4 U	-	-	-	-	0.28 U	0.29 U	0.28 U	0.27 U	0.3 U	0.29 U	0.27 U
Di-n-butylphthalate (DBP)	mg/kg	0.27 U	0.27 U	0.28 U	14 U	27 U	5.8 U	5.4 U	-	-	-	-	0.28 U	0.29 U	0.28 U	0.27 U	0.3 U	0.29 U	0.27 U
Di-n-octyl phthalate (DnOP)	mg/kg	0.27 U	0.27 U	0.28 U	14 U	27 U	5.8 U	5.4 U	-	-	-	-	0.28 U	0.29 U	0.28 U	0.27 U	0.3 U	0.29 U	0.27 U
Fluoranthene	mg/kg	0.061 J	0.071 J	0.012 J	1.7 J	27 U	3.1 J	0.93 J	-	-	-	-	0.22 J	0.29 U	0.06 J	0.27 U	0.072 J	0.058 J	0.27 U
Fluorene	mg/kg	0.14 J	0.17 J	0.006 J	0.5 J	27 U	0.22 J	1.9 J	-	-	-	-	0.0056 J	0.29 U	0.28 U	0.27 U	0.3 U	0.29 U	0.27 U
Hexachlorobenzene	mg/kg	0.27 U	0.27 U	0.28 U	14 U	27 U	5.8 U	5.4 U	-	-	-	-	0.28 U	0.29 U	0.28 U	0.27 U	0.3 U	0.29 U	0.27 U
Hexachlorobutadiene	mg/kg	0.041 U	0.041 U	0.043 U	2.1 U	4.1 U	0.88 U	0.82 U	-	-	-	-	0.042 U	0.044 U	0.042 U	0.042 U	0.045 U	0.044 U	0.041 U
Hexachlorocyclopentadiene	mg/kg	0.27 U	0.27 U	0.28 U	14 U	27 U	5.8 U	5.4 U	-	-	-	-	0.28 U	0.29 U	0.28 U	R	0.3 U	0.29 U	0.27 U
Hexachloroethane	mg/kg	0.27 U	0.27 U	0.28 U	14 U	27 U	5.8 U	5.4 U	-	-	-	-	0.28 U	0.29 U	0.28 U	0.27 U	0.3 U	0.29 U	0.27 U
Indeno(1,2,3-cd)pyrene	mg/kg	0.27 U	0.005 J	0.28 U	0.23 J	27 U	0.48 J	5.4 U	-	-	-	-	0.065 J	0.29 U	0.034 J	0.27 U	0.016 J	0.013 J	0.27 U
Isophorone	mg/kg	0.27 U	0.27 U	0.28 U	14 U	27 U	5.8 U	5.4 U	-	-	-	-	0.28 U	0.29 U	0.28 U	0.27 U	0.3 U	0.29 U	0.27 U
Naphthalene	mg/kg	0.23 J	0.24 J	0.0094 J	14 U	27 U	5.8 U	**0.75 J[d]**	-	-	-	-	0.28 U	0.29 U	0.28 U	0.012 J	0.3 U	0.29 U	0.27 U
Nitrobenzene	mg/kg	0.27 U	0.27 U	0.28 U	14 U	27 U	5.8 U	5.4 U	-	-	-	-	0.28 U	0.29 U	0.28 U	0.27 U	0.3 U	0.29 U	0.27 U
N-Nitrosodi-n-propylamine	mg/kg	0.27 U	0.27 U	0.28 U	14 U	27 U	5.8 U	5.4 U	-	-	-	-	0.28 U	0.29 U	0.28 U	0.27 U	0.3 U	0.29 U	0.27 U
N-Nitrosodiphenylamine	mg/kg	0.27 U	0.27 U	0.28 U	14 U	27 U	5.8 U	5.4 U	-	-	-	-	0.28 U	0.29 U	0.28 U	0.27 U	0.3 U	0.29 U	0.27 U
Pentachlorophenol	mg/kg	0.16 U	0.15 U	0.16 U	7.8 U	15 U	3.3 U	3.1 U	-	-	-	-	0.16 U	0.16 U	0.16 U	0.16 U	0.17 U	0.17 U	0.15 U
Phenanthrene	mg/kg	0.3	0.37	0.021 J	2 J	1.4 J	1.7 J	**5.6[d]**	-	-	-	-	0.078 J	0.29 U	0.02 J	0.0036 J	0.052 J	0.044 J	0.27 U
Phenol	mg/kg	0.27 U	0.27 U	0.28 U	14 U	27 U	5.8 U	5.4 U	-	-	-	-	0.28 U	0.29 U	0.28 U	0.27 U	0.3 U	0.29 U	0.27 U
Pyrene	mg/kg	0.053 J	0.064 J	0.012 J	1.5 J	0.56 J	1.9 J	0.96 J	-	-	-	-	0.19 J	0.29 U	0.075 J	0.0047 J	0.054 J	0.043 J	0.27 U
Metals																			
Aluminum	mg/kg	1900	2100	3000	2300	1000	3200	1600	-	-	-	-	4900	1600	2000	1400	5500	5900	1700
Antimony	mg/kg	0.047 J	0.048 J	0.057 J	0.33 J	0.065 J	0.077 J	0.066 J	-	-	-	-	0.086 J	0.04 J	0.07 J	0.062 J	0.046 J	0.034 J	0.04 J
Arsenic	mg/kg	2.1	2.5	4.2	**15[cd]**	1.5	3.2	1.8	-	-	-	-	3.7	1.8	3.5	1.9	2.9	3	1.2
Barium	mg/kg	5.9	6.8	18	12	6	22	4.6	-	-	-	-	36	4.8	8.2	5.5	24	22	5.3
Beryllium	mg/kg	0.11 U	0.14 U	0.16 U	0.14 U	0.14 U	0.19	0.11 J	-	-	-	-	0.49	0.075 J	0.087 J	0.058 J	0.18	0.14 J	0.049 J
Cadmium	mg/kg	0.083	0.096	0.16	0.76	0.09	0.086	0.067 U	-	-	-	-	1.5	0.056 J	0.15	0.056 J	0.23	0.17	0.096
Calcium	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chromium	mg/kg	4.8	5	8.3	5.6	2.7	7.6	3.8	-	-	-	-	9.6	3.4	4.7	3.7	8.3	8.3	6.1
Chromium III (trivalent)	mg/kg	-	-	-	-	-	7.6	3.8	-	-	-	-	9.6	3.4	4.7	3.7	8.3	7.7	6.1
Chromium VI (hexavalent)	mg/kg	-	-	-	-	-	0.88 U	0.82 U	-	-	-	-	0.84 U	0.87 U	0.83 UJ	0.83 UJ	0.9 U	0.67 J	0.83 U
Cobalt	mg/kg	2.3	2.8	4.2	2.4	1.2	3	2.1	-	-	-	-	3.4	1.5	2.4	1.6	**8.3[cd]**	**7.1[cd]**	2
Copper	mg/kg	7.2	7.5	11	8.7	3	11	6	-	-	-	-	8.1	5.2	6.7 J	4	7	5.1	5
Iron	mg/kg	5000	5800	8600	11000	2700	7300	4100	-	-	-	-	8400	4100	5800	3500	8300	7800	4300
Lead	mg/kg	3.2	3.2	5.1	9.6	4.5	6.2	2.7	-	-	-	-	15	2.2	3.4	2.1	7.1	6.1	2.1
Lead - coarse fraction	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lead - fine fraction	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lead - total (calculated by fine/coarse fraction)	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Magnesium	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

TABLE 3.8

PART 201 CRITERIA EXCEEDANCES - SOIL
2013 RFI REPORT
FORMER GENERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation		*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL02*	*CENTRAL02*	*CENTRAL02*	*CENTRAL02*	*CENTRAL02*	*CENTRAL02*	*CENTRAL02*
Perimeter Status (1)		*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*
Sample Location		*CRA-818SB*	*CRA-818SB*	*CRA-819SB*	*CRA-819SB*	*CRA-819SB*	*CRA-830SB*	*CRA-830SB*	*CRA-831SB*	*CRA-831SB*	*CRA-832SB*	*CRA-832SB*	*CRA-791M*	*CRA-791M*	*CRA-805M*	*CRA-805M*	*CRA-808M*	*CRA-808M*	*CRA-808M*
Sample Identification (SO-17358-)		*030812-CB-170*	*030812-CB-171*	*030812-CB-172*	*030812-CB-173*	*030812-CB-174*	*032612-CB-262*	*032612-CB-263*	*030812-CB-165*	*030812-CB-166*	*032612-CB-264*	*032612-CB-265*	*032212-CB-230*	*032212-CB-231*	*030212-CB-113*	*030212-CB-114*	*030512-CB-123*	*030512-CB-124*	*030512-CB-125*
Sample Date		*3/8/2012*	*3/8/2012*	*3/8/2012*	*3/8/2012*	*3/8/2012*	*3/26/2012*	*3/26/2012*	*3/8/2012*	*3/8/2012*	*3/26/2012*	*3/26/2012*	*3/22/2012*	*3/22/2012*	*3/2/2012*	*3/2/2012*	*3/5/2012*	*3/5/2012*	*3/5/2012*
Sample Depth		*(7-9) ft BGS*	*(7-9) ft BGS*	*(1-3) ft BGS*	*(3-5) ft BGS*	*(6.5-8.5) ft BGS*	*(1-3) ft BGS*	*(6.5-8.5) ft BGS*	*(1-3) ft BGS*	*(6.5-8.5) ft BGS*	*(0.5-2.5) ft BGS*	*(6.5-8.5) ft BGS*	*(0.5-2.5) ft BGS*	*(4-6) ft BGS*	*(0.5-2.5) ft BGS*	*(6.5-8.5) ft BGS*	*(1-3) ft BGS*	*(1-3) ft BGS*	*(5.5-7.5) ft BGS*
Sample Type			*Duplicate*															*Duplicate*	
	Units																		
Metals Continued																			
Manganese	mg/kg	180	170	300	260	85	170 J	85 J	-	-	-	-	440	120	160	110	170	120	120
Mercury	mg/kg	0.045 U	0.04 U	0.023 J	0.042 U	0.039 U	0.015 J	0.041 U	-	-	-	-	0.019 J	0.043 U	0.038 U	0.045 U	0.024 J	0.018 J	0.043 U
Nickel	mg/kg	7.5	8.8	10	6.8	3.3	8.6	6.2	-	-	-	-	8.9	4.3	6.6	5.4	7.2	6.8	5.2
Potassium	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Selenium	mg/kg	0.35 J	0.29 J	0.24 J	0.22 J	0.16 J	0.37 J	0.24 J	-	-	-	-	**0.5**[d]	0.17	0.17	0.26	0.3	0.24	0.19
Silver	mg/kg	0.057 U	0.069 U	0.081 U	0.071 U	0.068 U	0.033 J	0.067 U	-	-	-	-	0.074 U	0.074 U	0.082 U	0.083 U	0.084 U	0.085 U	0.077 U
Sodium	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Thallium	mg/kg	0.097 U	0.12 U	0.19 U	0.071 U	0.068 U	0.11	0.071 U	-	-	-	-	0.17	0.086 U	0.13	0.12 U	0.052 J	0.052 J	0.028 J
Vanadium	mg/kg	7.9	8.5	11	7.4	4.3	10	6.2	-	-	-	-	11	5.6	7.5	5.3	14	14	7.4
Zinc	mg/kg	14	18	27	42	8.4	24	14	-	-	-	-	22	14	24	9.8	20	19	13
Polychlorinated biphenyls (PCBs)																			
Aroclor-1016 (PCB-1016)	mg/kg	0.034 U	0.034 U	0.036 U	0.34 U	0.033 U	0.036 U	0.17 U	0.037 U	0.034 U	0.037 U	0.17 U	0.035 U	0.036 U	0.034 U	0.034 U	0.037 U	0.036 U	0.034 U
Aroclor-1221 (PCB-1221)	mg/kg	0.034 U	0.034 U	0.036 U	0.34 U	0.033 U	0.036 U	0.17 U	0.037 U	0.034 U	0.037 U	0.17 U	0.035 U	0.036 U	0.034 U	0.034 U	0.037 U	0.036 U	0.034 U
Aroclor-1232 (PCB-1232)	mg/kg	0.034 U	0.034 U	0.036 U	0.34 U	0.033 U	0.036 U	0.17 U	0.037 U	0.034 U	0.037 U	0.17 U	0.035 U	0.036 U	0.034 U	0.034 U	0.037 U	0.036 U	0.034 U
Aroclor-1242 (PCB-1242)	mg/kg	0.034 U	0.034 U	0.036 U	0.34 U	0.033 U	0.036 U	0.17 U	0.037 U	0.034 U	0.037 U	0.17 U	0.035 U	0.036 U	0.034 U	0.034 U	0.037 U	0.036 U	0.034 U
Aroclor-1248 (PCB-1248)	mg/kg	0.034 U	0.034 U	0.036 U	0.34 U	0.033 U	0.036 U	0.17 U	0.037 U	0.034 U	0.037 U	0.17 U	0.035 U	0.036 U	0.034 U	0.034 U	0.037 U	0.036 U	0.034 U
Aroclor-1254 (PCB-1254)	mg/kg	0.034 U	0.034 U	0.036 U	0.34 U	0.18	0.036 U	0.17 U	0.037 U	0.034 U	0.037 U	0.17 U	0.035 U	0.036 U	0.034 U	0.034 U	0.037 U	0.036 U	0.034 U
Aroclor-1260 (PCB-1260)	mg/kg	0.034 U	0.034 U	0.036 U	0.34 U	0.033 U	0.036 U	0.17 U	0.037 U	0.034 U	0.037 U	0.17 U	0.035 U	0.036 U	0.034 U	0.034 U	0.037 U	0.036 U	0.034 U
Aroclor-1262 (PCB-1262)	mg/kg	-	-	-	-	-	0.036 U	0.17 U	-	-	0.037 U	0.17 U	-	-	-	-	-	-	-
Aroclor-1268 (PCB-1268)	mg/kg	-	-	-	-	-	0.019 J	0.17 U	-	-	0.037 U	0.17 U	-	-	-	-	-	-	-
Total PCBs	mg/kg	ND	ND	ND	ND	0.18	0.019 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Notes

Michigan Part 201 generic clean up criteria (updated September 28, 2012)

ID - Insufficient data to develop criterion

NLV - Hazardous substance is not likely to volatilize under most conditions

NA - Criterion or value is not available

Perimeter Status (1) - N - non-perimeter, Y - perimeter

mg/kg - milligram/kilogram

Notes:

U - Not detected at the associated reporting limit.

J - Estimated concentration.

UJ - Not detected; associated reporting limit is estimated.

R - Rejected

TABLE 3.8

PART 201 CRITERIA EXCEEDANCES - SOIL
2013 RFI REPORT
FORMER GENERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation		*CENTRAL02*	*CENTRAL02*	*CENTRAL02*	*CENTRAL02*	*CENTRAL02*	*CENTRAL02*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*
Perimeter Status (1)		*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*
Sample Location		*CRA-815SB*	*CRA-815SB*	*CRA-820SB*	*CRA-820SB*	*CRA-821SB*	*CRA-821SB*	*CRA-743M*	*CRA-743M*	*CRA-755M*	*CRA-755M*	*CRA-806M*	*CRA-806M*	*CRA-807M*	*CRA-807M*	*CRA-813SB*	*CRA-813SB*	*CRA-814SB*	*CRA-814SB*
Sample Identification (SO-17358-)		*030712-CB-159*	*030712-CB-160*	*030512-CB-126*	*030512-CB-127*	*032612-CB-257*	*032612-CB-258*	*032112-CB-216*	*032112-CB-217*	*032212-CB-234*	*032212-CB-235*	*030212-CB-115*	*030212-CB-116*	*030512-CB-121*	*030512-CB-122*	*032212-CB-232*	*032212-CB-233*	*032212-CB-236*	*032212-CB-237*
Sample Date		*3/7/2012*	*3/7/2012*	*3/5/2012*	*3/5/2012*	*3/26/2012*	*3/26/2012*	*3/21/2012*	*3/21/2012*	*3/22/2012*	*3/22/2012*	*3/2/2012*	*3/2/2012*	*3/5/2012*	*3/5/2012*	*3/22/2012*	*3/22/2012*	*3/22/2012*	*3/22/2012*
Sample Depth		*(1-3) ft BGS*	*(7-9) ft BGS*	*(2.5-4.5) ft BGS*	*(6-8) ft BGS*	*(3-5) ft BGS*	*(5.5-7.5) ft BGS*	*(1-3) ft BGS*	*(8-10) ft BGS*	*(0.5-2.5) ft BGS*	*(6-8) ft BGS*	*(0.5-2.5) ft BGS*	*(6-8) ft BGS*	*(1.5-3.5) ft BGS*	*(5-7) ft BGS*	*(0-2) ft BGS*	*(7.5-9.5) ft BGS*	*(0.5-2.5) ft BGS*	*(6.5-8.5) ft BGS*
Sample Type																			
	Units																		
Volatile Organic Compounds (VOCs)																			
1,1,1-Trichloroethane	mg/kg	0.043 U	0.051 U	0.042 U	0.044 U	0.045 U	0.044 U	0.049 U	0.044 U	0.04 U	0.043 U	0.045 U	0.047 U	0.14 U	0.12 U	0.048 U	0.045 U	0.047 U	0.044 U
1,1,2,2-Tetrachloroethane	mg/kg	0.043 U	0.051 U	0.042 U	0.044 U	0.045 U	0.044 U	0.049 U	0.044 U	0.04 U	0.043 U	0.045 U	0.047 U	0.14 U	0.12 U	0.048 U	0.045 U	0.047 U	0.044 U
1,1,2-Trichloroethane	mg/kg	0.043 U	0.051 U	0.042 U	0.044 U	0.045 U	0.044 U	0.049 U	0.044 U	0.04 U	0.043 U	0.045 U	0.047 U	0.14 U	0.12 U	0.048 U	0.045 U	0.047 U	0.044 U
1,1-Dichloroethane	mg/kg	0.043 U	0.051 U	0.042 U	0.044 U	0.045 U	0.044 U	0.049 U	0.044 U	0.04 U	0.043 U	0.045 U	0.047 U	0.14 U	0.12 U	0.048 U	0.045 U	0.047 U	0.044 U
1,1-Dichloroethene	mg/kg	0.043 U	0.051 U	0.042 U	0.044 U	0.045 U	0.044 U	0.049 U	0.044 U	0.04 U	0.043 U	0.045 U	0.047 U	0.14 U	0.12 U	0.048 U	0.045 U	0.047 U	0.044 U
1,2,4-Trichlorobenzene	mg/kg	0.22 U	0.25 U	0.21 U	0.22 U	0.23 U	0.22 U	0.25 U	0.22 U	0.2 U	0.21 U	0.021 J	0.24 U	0.68 U	0.6 U	0.24 U	0.019 J	0.24 U	0.22 U
1,2-Dibromo-3-chloropropane (DBCP)	mg/kg	0.22 U	0.25 U	0.21 U	0.22 U	0.23 U	0.22 U	0.25 U	0.22 U	0.2 U	0.21 U	0.22 U	0.24 U	0.68 U	0.6 U	0.24 U	0.22 U	0.24 U	0.22 U
1,2-Dibromoethane (Ethylene dibromide)	mg/kg	0.22 U	0.25 U	0.21 U	0.22 U	0.23 U	0.22 U	0.25 U	0.22 U	0.2 U	0.21 U	0.22 U	0.24 U	0.68 U	0.6 U	0.24 U	0.22 U	0.24 U	0.22 U
1,2-Dichlorobenzene	mg/kg	0.087 U	0.1 U	0.084 U	0.087 U	0.09 U	0.088 U	0.098 U	0.089 U	0.081 U	0.086 U	0.089 U	0.095 U	0.27 U	0.24 U	0.096 U	0.09 U	0.095 U	0.087 U
1,2-Dichloroethane	mg/kg	0.043 U	0.051 U	0.042 U	0.044 U	0.045 U	0.044 U	0.049 U	0.044 U	0.04 U	0.043 U	0.045 U	0.047 U	0.14 U	0.12 U	0.048 U	0.045 U	0.047 U	0.044 U
1,2-Dichloropropane	mg/kg	0.043 U	0.051 U	0.042 U	0.044 U	0.045 U	0.044 U	0.049 U	0.044 U	0.04 U	0.043 U	0.045 U	0.047 U	0.14 U	0.12 U	0.048 U	0.045 U	0.032 J	0.044 U
1,3-Dichlorobenzene	mg/kg	0.087 U	0.1 U	0.084 U	0.087 U	0.09 U	0.088 U	0.098 U	0.089 U	0.081 U	0.086 U	0.089 U	0.095 U	0.27 U	0.24 U	0.096 U	0.09 U	0.095 U	0.087 U
1,4-Dichlorobenzene	mg/kg	0.087 U	0.1 U	0.084 U	0.087 U	0.09 U	0.088 U	0.098 U	0.089 U	0.081 U	0.086 U	0.089 U	0.095 U	0.27 U	0.24 U	0.096 U	0.09 U	0.095 U	0.087 U
2-Butanone (Methyl ethyl ketone) (MEK)	mg/kg	0.65 U	0.76 U	0.63 U	0.65 U	0.68 U	0.66 U	0.74 U	0.67 U	0.61 U	0.64 U	0.67 U	0.71 U	2 U	1.8 U	0.72 U	0.67 U	0.71 U	0.66 U
2-Hexanone	mg/kg	2.2 U	2.5 U	2.1 U	2.2 U	2.3 U	2.2 U	2.5 U	2.2 U	2 U	2.1 U	2.2 U	2.4 U	6.8 U	6 U	2.4 U	2.2 U	2.4 U	2.2 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	mg/kg	2.2 U	2.5 U	2.1 U	2.2 U	2.3 U	2.2 U	2.5 U	2.2 U	2 U	2.1 U	2.2 U	2.4 U	6.8 U	6 U	2.4 U	2.2 U	2.4 U	2.2 U
Acetone	mg/kg	0.65 U	0.76 U	0.63 U	0.65 U	0.68 U	0.66 U	0.74 U	0.67 U	0.61 U	0.64 U	0.67 U	0.71 U	2 U	1.8 U	0.72 U	0.67 U	0.71 U	0.66 U
Benzene	mg/kg	0.043 U	0.051 U	0.042 U	0.044 U	0.045 U	0.044 U	0.049 U	0.044 U	0.04 U	0.043 U	0.045 U	0.047 U	0.14 U	0.12 U	0.048 U	0.045 U	0.047 U	0.044 U
Bromodichloromethane	mg/kg	0.087 U	0.1 U	0.084 U	0.087 U	0.09 U	0.088 U	0.098 U	0.089 U	0.081 U	0.086 U	0.089 U	0.095 U	0.27 U	0.24 U	0.096 U	0.09 U	0.095 U	0.087 U
Bromoform	mg/kg	0.087 U	0.1 U	0.084 U	0.087 U	0.09 U	0.088 U	0.098 U	0.089 U	0.081 U	0.086 U	0.089 U	0.095 U	0.27 U	0.24 U	0.096 U	0.09 U	0.095 U	0.087 U
Bromomethane (Methyl bromide)	mg/kg	0.22 U	0.25 U	0.21 U	0.22 U	0.23 U	0.22 U	0.25 U	0.22 U	0.2 U	0.21 U	0.22 U	0.24 U	0.68 U	0.6 U	0.24 U	0.22 U	0.24 U	0.22 U
Carbon disulfide	mg/kg	0.22 U	0.25 U	0.21 U	0.22 U	0.23 U	0.22 U	0.25 U	0.22 U	0.2 U	0.21 U	0.22 U	0.24 U	0.68 U	0.6 U	0.24 U	0.22 U	0.24 U	0.22 U
Carbon tetrachloride	mg/kg	0.043 U	0.051 U	0.042 U	0.044 U	0.045 U	0.044 U	0.049 U	0.044 U	0.04 U	0.043 U	0.045 U	0.047 U	0.14 U	0.12 U	0.048 U	0.045 U	0.047 U	0.044 U
Chlorobenzene	mg/kg	0.043 U	0.051 U	0.042 U	0.044 U	0.045 U	0.044 U	0.049 U	0.044 U	0.04 U	0.043 U	0.045 U	0.047 U	0.14 U	0.12 U	0.048 U	0.045 U	0.047 U	0.044 U
Chloroethane	mg/kg	0.22 U	0.25 U	0.21 U	0.22 U	0.23 U	0.22 U	0.25 U	0.22 U	0.2 U	0.21 U	0.22 U	0.24 U	0.68 U	0.6 U	0.24 U	0.22 U	0.24 U	0.22 U
Chloroform (Trichloromethane)	mg/kg	0.043 U	0.051 U	0.042 U	0.044 U	0.045 U	0.044 U	0.049 U	0.044 U	0.04 U	0.043 U	0.045 U	0.047 U	0.14 U	0.12 U	0.048 U	0.045 U	0.047 U	0.044 U
Chloromethane (Methyl chloride)	mg/kg	0.22 U	0.25 U	0.21 U	0.22 U	0.23 U	0.22 U	0.25 U	0.22 U	0.2 U	0.21 U	0.22 U	0.24 U	0.68 U	0.6 U	0.24 U	0.22 U	0.24 U	0.22 U
cis-1,2-Dichloroethene	mg/kg	0.043 U	0.051 U	0.042 U	0.044 U	0.045 U	0.044 U	0.022 J	0.044 U	0.04 U	0.043 U	0.045 U	0.047 U	0.14 U	0.12 U	0.048 U	0.045 U	0.047 U	0.044 U
cis-1,3-Dichloropropene	mg/kg	0.043 U	0.051 U	0.042 U	0.044 U	0.045 U	0.044 U	0.049 U	0.044 U	0.04 U	0.043 U	0.045 U	0.047 U	0.14 U	0.12 U	0.048 U	0.045 U	0.047 U	0.044 U
Cyclohexane	mg/kg	1 U	1.2 U	1 U	1 U	1.1 U	1.1 U	1.2 U	1.1 U	0.97 U	1 U	1.1 U	1.1 U	3.3 U	2.9 U	1.2 U	1.1 U	1.1 U	1 U
Dibromochloromethane	mg/kg	0.043 U	0.051 U	0.042 U	0.044 U	0.045 U	0.044 U	0.049 U	0.044 U	0.04 U	0.043 U	0.045 U	0.047 U	0.14 U	0.12 U	0.048 U	0.045 U	0.047 U	0.044 U
Dichlorodifluoromethane (CFC-12)	mg/kg	0.087 U	0.1 U	0.084 U	0.087 U	0.09 U	0.088 U	0.098 U	0.089 U	0.081 U	0.086 U	0.089 U	0.095 U	0.27 U	0.24 U	0.096 U	0.09 U	0.095 U	0.087 U
Ethylbenzene	mg/kg	0.043 U	0.03 J	0.042 U	0.044 U	0.045 U	0.044 U	0.0095 J	0.044 U	0.04 U	0.043 U	0.045 U	0.047 U	0.14 U	0.12 U	0.048 U	0.045 U	0.012 J	0.044 U
Isopropyl benzene	mg/kg	0.22 U	0.037 J	0.21 U	0.22 U	0.23 U	0.22 U	0.013 J	0.22 U	0.2 U	0.21 U	0.22 U	0.24 U	0.68 U	0.6 U	0.24 U	0.22 U	0.24 U	0.22 U
Methyl acetate	mg/kg	0.03 J	1.2 U	1 U	1 U	1.1 U	1.1 U	0.064 J	1.1 U	0.97 U	1 U	0.088 J	1.1 U	3.3 U	2.9 U	1.2 U	1.1 U	1.1 U	0.032 J
Methyl cyclohexane	mg/kg	1 U	0.032 J	1 U	1 U	1.1 U	1.1 U	0.11 J	1.1 U	0.97 U	1 U	0.013 J	1.1 U	3.3 U	2.9 U	1.2 U	1.1 U	1.1 U	1 U
Methyl tert butyl ether (MTBE)	mg/kg	0.22 U	0.25 U	0.21 U	0.22 U	0.23 U	0.22 U	0.25 U	0.22 U	0.2 U	0.21 U	0.22 U	0.24 U	0.68 U	0.6 U	0.24 U	0.22 U	0.24 U	0.22 U
Methylene chloride	mg/kg	0.22 U	0.25 U	0.21 U	0.22 U	0.23 U	0.22 U	0.25 U	0.22 U	0.2 U	0.21 U	0.22 U	0.24 U	0.68 U	0.6 U	0.24 U	0.22 U	0.24 U	0.22 U
Styrene	mg/kg	0.043 U	0.051 U	0.042 U	0.044 U	0.045 U	0.044 U	0.049 U	0.044 U	0.04 U	0.043 U	0.045 U	0.047 U	0.14 U	0.12 U	0.048 U	0.045 U	0.047 U	0.044 U
Tetrachloroethene	mg/kg	0.043 U	0.051 U	0.042 U	0.044 U	0.045 U	0.044 U	0.049 U	0.044 U	0.04 U	0.043 U	0.045 U	0.047 U	**9.9[cd]**	**10[cd]**	0.048 U	0.045 U	0.047 U	0.044 U
Toluene	mg/kg	0.087 U	0.1 U	0.084 U	0.087 U	0.09 U	0.088 U	0.098 U	0.089 U	0.081 U	0.086 U	0.089 U	0.095 U	0.06 J	0.24 U	0.096 U	0.09 U	0.095 U	0.087 U
trans-1,2-Dichloroethene	mg/kg	0.043 U	0.051 U	0.042 U	0.044 U	0.045 U	0.044 U	0.015 J	0.044 U	0.04 U	0.043 U	0.045 U	0.047 U	0.14 U	0.12 U	0.048 U	0.045 U	0.047 U	0.044 U
trans-1,3-Dichloropropene	mg/kg	0.043 U	0.051 U	0.042 U	0.044 U	0.045 U	0.044 U	0.049 U	0.044 U	0.04 U	0.043 U	0.045 U	0.047 U	0.14 U	0.12 U	0.048 U	0.045 U	0.047 U	0.044 U
Trichloroethene	mg/kg	0.043 U	0.051 U	0.042 U	0.044 U	0.045 U	0.044 U	**0.56[c]**	0.044 U	0.04 U	0.043 U	0.045 U	**0.45[c]**	0.1 J	0.098 J	0.048 U	0.045 U	0.047 U	0.012 J

TABLE 3.8

PART 201 CRITERIA EXCEEDANCES - SOIL
2013 RFI REPORT
FORMER GENERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation		*CENTRAL02*	*CENTRAL02*	*CENTRAL02*	*CENTRAL02*	*CENTRAL02*	*CENTRAL02*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*
Perimeter Status (1)		*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*
Sample Location		*CRA-815SB*	*CRA-815SB*	*CRA-820SB*	*CRA-820SB*	*CRA-821SB*	*CRA-821SB*	*CRA-743M*	*CRA-743M*	*CRA-755M*	*CRA-755M*	*CRA-806M*	*CRA-806M*	*CRA-807M*	*CRA-807M*	*CRA-813SB*	*CRA-813SB*	*CRA-814SB*	*CRA-814SB*
Sample Identification (SO-17358-)		*030712-CB-159*	*030712-CB-160*	*030512-CB-126*	*030512-CB-127*	*032612-CB-257*	*032612-CB-258*	*032112-CB-216*	*032112-CB-217*	*032212-CB-234*	*032212-CB-235*	*030212-CB-115*	*030212-CB-116*	*030512-CB-121*	*030512-CB-122*	*032212-CB-232*	*032212-CB-233*	*032212-CB-236*	*032212-CB-237*
Sample Date		*3/7/2012*	*3/7/2012*	*3/5/2012*	*3/5/2012*	*3/26/2012*	*3/26/2012*	*3/21/2012*	*3/21/2012*	*3/22/2012*	*3/22/2012*	*3/2/2012*	*3/2/2012*	*3/5/2012*	*3/5/2012*	*3/22/2012*	*3/22/2012*	*3/22/2012*	*3/22/2012*
Sample Depth		*(1-3) ft BGS*	*(7-9) ft BGS*	*(2.5-4.5) ft BGS*	*(6-8) ft BGS*	*(3-5) ft BGS*	*(5.5-7.5) ft BGS*	*(1-3) ft BGS*	*(8-10) ft BGS*	*(0.5-2.5) ft BGS*	*(6-8) ft BGS*	*(0.5-2.5) ft BGS*	*(6-8) ft BGS*	*(1.5-3.5) ft BGS*	*(5-7) ft BGS*	*(0-2) ft BGS*	*(7.5-9.5) ft BGS*	*(0.5-2.5) ft BGS*	*(6.5-8.5) ft BGS*
Sample Type																			
	Units																		
VOCs Continued																			
Trichlorofluoromethane (CFC-11)	mg/kg	0.087 U	0.1 U	0.084 U	0.087 U	0.09 U	0.088 U	0.098 U	0.089 U	0.081 U	0.086 U	0.089 U	0.095 U	0.27 U	0.24 U	0.096 U	0.09 U	0.095 U	0.087 U
Trifluorotrichloroethane (Freon 113)	mg/kg	0.22 U	0.25 U	0.21 U	0.22 U	0.23 U	0.22 U	0.25 U	0.22 U	0.2 U	0.21 U	0.22 U	0.24 U	0.68 U	0.6 U	0.24 U	0.22 U	0.24 U	0.22 U
Vinyl chloride	mg/kg	0.035 U	0.041 U	0.034 U	0.035 U	0.036 U	0.035 U	0.039 U	0.036 U	0.032 U	0.034 U	0.036 U	0.038 U	0.11 U	0.097 U	0.038 U	0.036 U	0.038 U	0.035 U
Xylenes (total)	mg/kg	0.13 U	0.13 J	0.13 U	0.13 U	0.14 U	0.13 U	0.084 J	0.13 U	0.12 U	0.13 U	0.13 U	0.14 U	0.053 J	0.36 U	0.14 U	0.13 U	0.043 J	0.13 U
Semi-Volatile Organic Compounds (SVOCs)																			
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	mg/kg	0.29 U	15 U	0.27 U	0.29 U	14 U	5.4 U	3 U	0.3 U	0.28 U	0.29 U	0.29 U	0.28 U	0.29 U	0.3 U	0.28 U	5.9 U	16 U	0.29 U
2,4,5-Trichlorophenol	mg/kg	0.29 U	15 U	0.27 U	0.29 U	14 U	5.4 U	3 U	0.3 U	0.28 U	0.29 U	0.29 U	0.28 U	0.29 U	0.3 U	0.28 U	5.9 U	16 U	0.29 U
2,4,6-Trichlorophenol	mg/kg	0.29 U	15 U	0.27 U	0.29 U	14 U	5.4 U	3 U	0.3 U	0.28 U	0.29 U	0.29 U	0.28 U	0.29 U	0.3 U	0.28 U	5.9 U	16 U	0.29 U
2,4-Dichlorophenol	mg/kg	0.29 U	15 U	0.27 U	0.29 U	14 U	5.4 U	3 U	0.3 U	0.28 U	0.29 U	0.29 U	0.28 U	0.29 U	0.3 U	0.28 U	5.9 U	16 U	0.29 U
2,4-Dimethylphenol	mg/kg	0.29 U	15 U	0.27 U	0.29 U	14 U	5.4 U	3 U	0.3 U	0.28 U	0.29 U	0.29 U	0.28 U	0.29 U	0.3 U	0.28 U	5.9 U	16 U	0.29 U
2,4-Dinitrophenol	mg/kg	0.16 U	8.6 U	0.16 U	0.16 U	8 U	3.1 U	1.7 U	0.17 U	0.16 U	0.16 U	0.17 U	0.16 U	0.16 U	0.17 U	0.16 U	3.3 U	8.8 U	0.16 U
2,4-Dinitrotoluene	mg/kg	0.29 U	15 U	0.27 U	0.29 U	14 U	5.4 U	3 U	0.3 U	0.28 U	0.29 U	0.29 U	0.28 U	0.29 U	0.3 U	0.28 U	5.9 U	16 U	0.29 U
2,6-Dinitrotoluene	mg/kg	0.29 U	15 U	0.27 U	0.29 U	14 U	5.4 U	3 U	0.3 U	0.28 U	0.29 U	0.29 U	0.28 U	0.29 U	0.3 U	0.28 U	5.9 U	16 U	0.29 U
2-Chloronaphthalene	mg/kg	0.29 U	15 U	0.27 U	0.29 U	14 U	5.4 U	3 U	0.3 U	0.28 U	0.29 U	0.29 U	0.28 U	0.29 U	0.3 U	0.28 U	5.9 U	16 U	0.29 U
2-Chlorophenol	mg/kg	0.29 U	15 U	0.27 U	0.29 U	14 U	5.4 U	3 U	0.3 U	0.28 U	0.29 U	0.29 U	0.28 U	0.29 U	0.3 U	0.28 U	5.9 U	16 U	0.29 U
2-Methylnaphthalene	mg/kg	0.29 U	1.3 J	0.0062 J	0.29 U	14 U	5.4 U	0.44 J	0.3 U	0.0038 J	0.29 U	0.29 U	0.28 U	0.29 U	0.3 U	0.0045 J	5.9 U	0.33 J	0.29 U
2-Methylphenol	mg/kg	0.29 U	15 U	0.27 U	0.29 U	14 U	5.4 U	3 U	0.3 U	0.28 U	0.29 U	0.29 U	0.28 U	0.29 U	0.3 U	0.28 U	5.9 U	16 U	0.29 U
2-Nitroaniline	mg/kg	0.22 U	11 U	0.21 U	0.22 U	11 U	4.1 U	2.3 U	0.23 U	0.21 U	0.22 U	0.22 U	0.21 U	0.22 U	0.23 U	0.21 U	4.5 U	12 U	0.22 U
2-Nitrophenol	mg/kg	0.29 U	15 U	0.27 U	0.29 U	14 U	5.4 U	3 U	0.3 U	0.28 U	0.29 U	0.29 U	0.28 U	0.29 U	0.3 U	0.28 U	5.9 U	16 U	0.29 U
3&4-Methylphenol	mg/kg	0.29 U	15 U	0.27 U	0.29 U	14 U	5.4 U	3 U	0.3 U	0.28 U	0.29 U	0.29 U	0.28 U	0.29 U	0.3 U	0.28 U	5.9 U	16 U	0.29 U
3,3'-Dichlorobenzidine	mg/kg	1.7 U	92 U	1.7 U	1.8 U	85 U	33 U	18 U	1.8 U	1.7 U	1.7 U	1.8 U	1.7 U	1.7 U	1.8 U	1.7 U	36 U	94 U	1.7 U
3-Nitroaniline	mg/kg	0.22 U	11 U	0.21 U	0.22 U	11 U	4.1 U	2.3 U	0.23 U	0.21 U	0.22 U	0.22 U	0.21 U	0.22 U	0.23 U	0.21 U	4.5 U	12 U	0.22 U
4,6-Dinitro-2-methylphenol	mg/kg	0.16 U	8.6 U	0.16 U	0.16 U	8 U	3.1 U	1.7 U	0.17 U	0.16 U	0.16 U	0.17 U	0.16 U	0.16 U	0.17 U	0.16 U	3.3 U	8.8 U	0.16 U
4-Bromophenyl phenyl ether	mg/kg	0.29 U	15 U	0.27 U	0.29 U	14 U	5.4 U	3 U	0.3 U	0.28 U	0.29 U	0.29 U	0.28 U	0.29 U	0.3 U	0.28 U	5.9 U	16 U	0.29 U
4-Chloro-3-methylphenol	mg/kg	0.29 U	15 U	0.27 U	0.29 U	14 U	5.4 U	3 U	0.3 U	0.28 U	0.29 U	0.29 U	0.28 U	0.29 U	0.3 U	0.28 U	5.9 U	16 U	0.29 U
4-Chloroaniline	mg/kg	0.22 U	11 U	0.21 U	0.22 U	11 U	4.1 U	2.3 U	0.23 U	0.21 U	0.22 U	0.22 U	0.21 U	0.22 U	0.23 U	0.21 U	4.5 U	12 U	0.22 U
4-Chlorophenyl phenyl ether	mg/kg	0.29 U	15 U	0.27 U	0.29 U	14 U	5.4 U	3 U	0.3 U	0.28 U	0.29 U	0.29 U	0.28 U	0.29 U	0.3 U	0.28 U	5.9 U	16 U	0.29 U
4-Nitroaniline	mg/kg	0.22 U	11 U	0.21 U	0.22 U	11 U	4.1 U	2.3 U	0.23 U	0.21 U	0.22 U	0.22 U	0.21 U	0.22 U	0.23 U	0.21 U	4.5 U	12 U	0.22 U
4-Nitrophenol	mg/kg	0.36 U	19 U	0.34 U	0.36 U	18 U	6.8 U	3.7 U	0.38 U	0.35 U	0.36 U	0.37 U	0.34 U	0.36 U	0.37 U	0.35 U	7.3 U	19 U	0.36 U
Acenaphthene	mg/kg	0.0071 J	15 U	0.27 U	0.29 U	14 U	5.4 U	3 U	0.3 U	0.28 U	0.29 U	0.29 U	0.28 U	0.29 U	0.0087 J	0.28 U	5.9 U	16 U	0.29 U
Acenaphthylene	mg/kg	0.29 U	15 U	0.27 U	0.29 U	14 U	5.4 U	3 U	0.3 U	0.28 U	0.29 U	0.29 U	0.28 U	0.29 U	0.3 U	0.28 U	5.9 U	16 U	0.29 U
Acetophenone	mg/kg	0.29 U	15 U	0.27 U	0.29 U	14 U	5.4 U	3 U	0.3 U	0.28 U	0.29 U	0.29 U	0.28 U	0.29 U	0.3 U	0.28 U	5.9 U	16 U	0.29 U
Anthracene	mg/kg	0.0089 J	15 U	0.27 U	0.29 U	14 U	5.4 U	0.044 J	0.3 U	0.034 J	0.29 U	0.29 U	0.28 U	0.0062 J	0.034 J	0.28 U	5.9 U	16 U	0.29 U
Atrazine	mg/kg	0.044 U	2.3 U	0.041 U	0.044 U	2.1 U	0.82 U	0.45 U	0.046 U	0.042 U	0.044 U	0.044 U	0.042 U	0.044 U	0.045 U	0.042 U	0.89 U	2.4 U	0.043 U
Benzaldehyde	mg/kg	0.29 U	15 U	0.27 U	0.29 U	14 U	5.4 U	3 U	0.3 U	0.28 U	0.29 U	0.29 U	0.28 U	0.29 U	0.3 U	0.28 U	5.9 U	16 U	0.29 U
Benzo(a)anthracene	mg/kg	0.022 J	15 U	0.27 U	0.29 U	14 U	5.4 U	0.27 J	0.3 U	0.18 J	0.29 U	0.012 J	0.28 U	0.033 J	0.11 J	0.28 U	5.9 U	16 U	0.29 U
Benzo(a)pyrene	mg/kg	0.011 J	15 U	0.27 U	0.29 U	14 U	5.4 U	0.27 J	0.3 U	0.13 J	0.29 U	0.012 J	0.28 U	0.036 J	0.1 J	0.28 U	5.9 U	16 U	0.29 U
Benzo(b)fluoranthene	mg/kg	0.022 J	15 U	0.27 U	0.29 U	14 U	5.4 U	0.5 J	0.3 U	0.18 J	0.29 U	0.018 J	0.28 U	0.048 J	0.15 J	0.28 U	5.9 U	16 U	0.29 U
Benzo(g,h,i)perylene	mg/kg	0.012 J	15 U	0.27 U	0.29 U	14 U	5.4 U	0.18 J	0.3 U	0.075 J	0.29 U	0.015 J	0.28 U	0.029 J	0.071 J	0.28 U	5.9 U	16 U	0.29 U
Benzo(k)fluoranthene	mg/kg	0.0089 J	15 U	0.27 U	0.29 U	14 U	5.4 U	0.15 J	0.3 U	0.079 J	0.29 U	0.0083 J	0.28 U	0.022 J	0.053 J	0.28 U	5.9 U	16 U	0.29 U
Biphenyl (1,1-Biphenyl)	mg/kg	0.29 U	1.5 J	0.27 U	0.29 U	14 U	5.4 U	3 U	0.3 U	0.28 U	0.29 U	0.29 U	0.28 U	0.29 U	0.3 U	0.28 U	5.9 U	16 U	0.29 U
bis(2-Chloroethoxy)methane	mg/kg	0.29 U	15 U	0.27 U	0.29 U	14 U	5.4 U	3 U	0.3 U	0.28 U	0.29 U	0.29 U	0.28 U	0.29 U	0.3 U	0.28 U	5.9 U	16 U	0.29 U
bis(2-Chloroethyl)ether	mg/kg	0.087 U	4.6 U	0.083 U	0.088 U	4.3 U	1.6 U	0.91 U	0.092 U	0.084 U	0.087 U	0.089 U	0.083 U	0.087 U	0.09 U	0.084 U	1.8 U	4.7 U	0.087 U
bis(2-Ethylhexyl)phthalate (DEHP)	mg/kg	0.05 J	15 U	0.27 U	0.026 J	14 U	5.4 U	3 U	0.3 U	0.28 U	0.29 U	0.29 U	0.28 U	0.039 J	0.026 J	0.28 U	5.9 U	16 U	0.29 U

TABLE 3.8

PART 201 CRITERIA EXCEEDANCES - SOIL
2013 RFI REPORT
FORMER GENERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation		*CENTRAL02*	*CENTRAL02*	*CENTRAL02*	*CENTRAL02*	*CENTRAL02*	*CENTRAL02*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*
Perimeter Status (1)		*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*
Sample Location		*CRA-815SB*	*CRA-815SB*	*CRA-820SB*	*CRA-820SB*	*CRA-821SB*	*CRA-821SB*	*CRA-743M*	*CRA-743M*	*CRA-755M*	*CRA-755M*	*CRA-806M*	*CRA-806M*	*CRA-807M*	*CRA-807M*	*CRA-813SB*	*CRA-813SB*	*CRA-814SB*	*CRA-814SB*
Sample Identification (SO-17358-)		*030712-CB-159*	*030712-CB-160*	*030512-CB-126*	*030512-CB-127*	*032612-CB-257*	*032612-CB-258*	*032112-CB-216*	*032112-CB-217*	*032212-CB-234*	*032212-CB-235*	*030212-CB-115*	*030212-CB-116*	*030512-CB-121*	*030512-CB-122*	*032212-CB-232*	*032212-CB-233*	*032212-CB-236*	*032212-CB-237*
Sample Date		*3/7/2012*	*3/7/2012*	*3/5/2012*	*3/5/2012*	*3/26/2012*	*3/26/2012*	*3/21/2012*	*3/21/2012*	*3/22/2012*	*3/22/2012*	*3/2/2012*	*3/2/2012*	*3/5/2012*	*3/5/2012*	*3/22/2012*	*3/22/2012*	*3/22/2012*	*3/22/2012*
Sample Depth		*(1-3) ft BGS*	*(7-9) ft BGS*	*(2.5-4.5) ft BGS*	*(6-8) ft BGS*	*(3-5) ft BGS*	*(5.5-7.5) ft BGS*	*(1-3) ft BGS*	*(8-10) ft BGS*	*(0.5-2.5) ft BGS*	*(6-8) ft BGS*	*(0.5-2.5) ft BGS*	*(6-8) ft BGS*	*(1.5-3.5) ft BGS*	*(5-7) ft BGS*	*(0-2) ft BGS*	*(7.5-9.5) ft BGS*	*(0.5-2.5) ft BGS*	*(6.5-8.5) ft BGS*
Sample Type																			
	Units																		
SVOCs Continued																			
Butyl benzylphthalate (BBP)	mg/kg	0.29 U	15 U	0.27 U	0.29 U	14 U	5.4 U	3 U	0.3 U	0.28 U	0.29 U	0.29 U	0.28 U	0.29 U	0.3 U	0.28 U	5.9 U	16 U	0.29 U
Caprolactam	mg/kg	0.29 U	15 U	0.27 U	0.29 U	14 U	5.4 U	3 U	0.3 U	0.28 U	0.29 U	0.29 U	0.28 U	0.29 U	0.3 U	0.28 U	5.9 U	16 U	0.29 U
Carbazole	mg/kg	0.29 U	15 U	0.27 U	0.29 U	14 U	5.4 U	3 U	0.3 U	0.28 U	0.29 U	0.29 U	0.28 U	0.29 U	0.3 U	0.28 U	5.9 U	16 U	0.29 U
Chrysene	mg/kg	0.019 J	15 U	0.27 U	0.29 U	14 U	5.4 U	0.28 J	0.3 U	0.19 J	0.0063 J	0.016 J	0.28 U	0.034 J	0.12 J	0.28 U	5.9 U	16 U	0.0064 J
Dibenz(a,h)anthracene	mg/kg	0.29 U	15 U	0.27 U	0.29 U	14 U	5.4 U	3 U	0.3 U	0.018 J	0.29 U	0.29 U	0.28 U	0.29 U	0.3 U	0.28 U	5.9 U	16 U	0.29 U
Dibenzofuran	mg/kg	0.29 U	15 U	0.27 U	0.29 U	14 U	5.4 U	0.054 J	0.3 U	0.28 U	0.29 U	0.29 U	0.28 U	0.0038 J	0.3 U	0.28 U	5.9 U	16 U	0.29 U
Diethyl phthalate	mg/kg	0.29 U	15 U	0.27 U	0.29 U	14 U	5.4 U	3 U	0.3 U	0.28 U	0.29 U	0.29 U	0.28 U	0.29 U	0.3 U	0.28 U	5.9 U	16 U	0.29 U
Dimethyl phthalate	mg/kg	0.29 U	15 U	0.27 U	0.29 U	14 U	5.4 U	3 U	0.3 U	0.28 U	0.29 U	0.29 U	0.28 U	0.29 U	0.3 U	0.28 U	5.9 U	16 U	0.29 U
Di-n-butylphthalate (DBP)	mg/kg	0.29 U	15 U	0.27 U	0.29 U	14 U	5.4 U	3 U	0.3 U	0.28 U	0.29 U	0.29 U	0.28 U	0.017 J	0.3 U	0.28 U	5.9 U	16 U	0.29 U
Di-n-octyl phthalate (DnOP)	mg/kg	0.29 U	15 U	0.27 U	0.29 U	14 U	5.4 U	3 U	0.3 U	0.28 U	0.29 U	0.29 U	0.28 U	0.29 U	0.3 U	0.28 U	5.9 U	16 U	0.29 U
Fluoranthene	mg/kg	0.048 J	0.72 J	0.27 U	0.29 U	14 U	5.4 U	0.47 J	0.3 U	0.39	0.29 U	0.023 J	0.28 U	0.063 J	0.32	0.28 U	5.9 U	0.48 J	0.29 U
Fluorene	mg/kg	0.29 U	1.9 J	0.27 U	0.29 U	14 U	5.4 U	3 U	0.3 U	0.0048 J	0.29 U	0.29 U	0.28 U	0.29 U	0.0096 J	0.28 U	5.9 U	16 U	0.29 U
Hexachlorobenzene	mg/kg	0.29 U	15 U	0.27 U	0.29 U	14 U	5.4 U	3 U	0.3 U	0.28 U	0.29 U	0.29 U	0.28 U	0.29 U	0.3 U	0.28 U	5.9 U	16 U	0.29 U
Hexachlorobutadiene	mg/kg	0.044 U	2.3 U	0.041 U	0.044 U	2.1 U	0.82 U	0.45 U	0.046 U	0.042 U	0.044 U	0.044 U	0.042 U	0.044 U	0.045 U	0.042 U	0.89 U	2.4 U	0.043 U
Hexachlorocyclopentadiene	mg/kg	0.29 U	15 U	0.27 U	0.29 U	14 U	5.4 U	3 U	0.3 U	0.28 U	0.29 U	0.29 U	0.28 U	0.29 U	0.3 U	0.28 U	5.9 U	16 U	0.29 U
Hexachloroethane	mg/kg	0.29 U	15 U	0.27 U	0.29 U	14 U	5.4 U	3 U	0.3 U	0.28 U	0.29 U	0.29 U	0.28 U	0.29 U	0.3 U	0.28 U	5.9 U	16 U	0.29 U
Indeno(1,2,3-cd)pyrene	mg/kg	0.0089 J	15 U	0.27 U	0.29 U	14 U	5.4 U	0.15 J	0.3 U	0.064 J	0.29 U	0.0084 J	0.28 U	0.022 J	0.056 J	0.28 U	5.9 U	16 U	0.29 U
Isophorone	mg/kg	0.29 U	15 U	0.27 U	0.29 U	14 U	5.4 U	3 U	0.3 U	0.28 U	0.29 U	0.29 U	0.28 U	0.29 U	0.3 U	0.28 U	5.9 U	16 U	0.29 U
Naphthalene	mg/kg	0.29 U	15 U	0.019 J	0.29 U	14 U	5.4 U	0.4 J	0.3 U	0.28 U	0.29 U	0.29 U	0.28 U	0.29 U	0.3 U	0.28 U	5.9 U	16 U	0.29 U
Nitrobenzene	mg/kg	0.29 U	15 U	0.27 U	0.29 U	14 U	5.4 U	3 U	0.3 U	0.28 U	0.29 U	0.29 U	0.28 U	0.29 U	0.3 U	0.28 U	5.9 U	16 U	0.29 U
N-Nitrosodi-n-propylamine	mg/kg	0.29 U	15 U	0.27 U	0.29 U	14 U	5.4 U	3 U	0.3 U	0.28 U	0.29 U	0.29 U	0.28 U	0.29 U	0.3 U	0.28 U	5.9 U	16 U	0.29 U
N-Nitrosodiphenylamine	mg/kg	0.29 U	15 U	0.27 U	0.29 U	14 U	5.4 U	3 U	0.3 U	0.28 U	0.29 U	0.29 U	0.28 U	0.29 U	0.3 U	0.28 U	5.9 U	16 U	0.29 U
Pentachlorophenol	mg/kg	0.16 U	8.6 U	0.16 U	0.16 U	8 U	3.1 U	1.7 U	0.17 U	0.16 U	0.16 U	0.17 U	0.16 U	0.16 U	0.17 U	0.16 U	3.3 U	8.8 U	0.16 U
Phenanthrene	mg/kg	0.03 J	**4.7 J[d]**	0.27 U	0.29 U	0.33 J	5.4 U	0.24 J	0.3 U	0.12 J	0.29 U	0.01 J	0.28 U	0.027 J	0.18 J	0.28 U	5.9 U	0.69 J	0.29 U
Phenol	mg/kg	0.29 U	15 U	0.27 U	0.29 U	14 U	5.4 U	3 U	0.3 U	0.28 U	0.29 U	0.29 U	0.28 U	0.29 U	0.3 U	0.28 U	5.9 U	16 U	0.29 U
Pyrene	mg/kg	0.036 J	0.72 J	0.27 U	0.29 U	14 U	0.073 J	0.41 J	0.3 U	0.31	0.0048 J	0.021 J	0.28 U	0.049 J	0.25 J	0.28 U	5.9 U	0.41 J	0.0076 J
Metals																			
Aluminum	mg/kg	5100	1500	1600	4400	1800	1400	6100	1200	1800	1500	4300	1500	3100	2700	1800	1600	2600	1800
Antimony	mg/kg	0.037 J	0.035 J	0.067 J	0.16 UJ	0.045 J	0.087 J	0.37 J	0.061 J	0.072 J	0.052 J	0.044 J	0.029 J	0.045 J	0.053 J	0.083 J	0.049 J	0.071 J	0.042 J
Arsenic	mg/kg	3.9	1.6	0.72	1	1.8	1.9	**11[cd]**	2.1	2.2	1.8	3.5	1.4	2.9	3.3	1.4	1.8	3.1	1.2
Barium	mg/kg	23	5.8	4.8	21	7	6.4	99	6.1	7.8	6.2	23	6.6	17	11	11	5.6	21	7
Beryllium	mg/kg	0.17 U	0.15 U	0.055 J	0.13 J	0.11 J	0.084 J	0.92	0.18 U	0.1 J	0.079 J	0.23	0.048 J	0.31	0.13 J	0.078 J	0.075 J	0.13 J	0.085 J
Cadmium	mg/kg	0.2	0.086	0.46	0.092	0.047 J	0.047 J	0.3	0.077 J	0.085	0.073 J	0.16	0.094	0.16	0.18	0.038 J	0.075 J	0.12	0.14
Calcium	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chromium	mg/kg	11	3.6	4.5	9.4	4.2	3.8	17	3.2	5	3.6	8.8	3.6	6.7	6.3	3.8	3.6	5.7	5.2
Chromium III (trivalent)	mg/kg	-	-	-	-	-	-	17	3.2	5	3.6	8.8	3.6	6.7	5.7	-	-	-	-
Chromium VI (hexavalent)	mg/kg	-	-	-	-	-	-	0.91 U	0.92 U	0.84 U	0.88 U	0.9 UJ	0.83 UJ	0.87 U	0.63 J	-	-	-	-
Cobalt	mg/kg	4.4	1.9	3.2	2.2	2.1	2.1	2.8	1.4	1.9	1.8	2.6	1.7	3.1	2.9	1.5	1.8	2.8	2.7
Copper	mg/kg	15	4	19	4	5.4	4.5	10	3.3	9	4.3	7.1 J	4.2 J	6.3	7.4	3	5.9	9.5	7.7
Iron	mg/kg	10000	3800	3100	5900	4800	3400	**13000[c]**	3700	5600	3700	9000	3700	6900	7200	3600	3900	6400	3400
Lead	mg/kg	8.2	2.3	2.9	4.2	2.5	2.5	39	2.3	3.7	2.1	5.5	2.7	5	4.1	2.8	2.2	5.7	2.7
Lead - coarse fraction	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lead - fine fraction	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lead - total (calculated by fine/coarse fraction)	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Magnesium	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

TABLE 3.8

PART 201 CRITERIA EXCEEDANCES - SOIL
2013 RFI REPORT
FORMER GENERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation		*CENTRAL02*	*CENTRAL02*	*CENTRAL02*	*CENTRAL02*	*CENTRAL02*	*CENTRAL02*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*
Perimeter Status (1)		*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*
Sample Location		*CRA-815SB*	*CRA-815SB*	*CRA-820SB*	*CRA-820SB*	*CRA-821SB*	*CRA-821SB*	*CRA-743M*	*CRA-743M*	*CRA-755M*	*CRA-755M*	*CRA-806M*	*CRA-806M*	*CRA-807M*	*CRA-807M*	*CRA-813SB*	*CRA-813SB*	*CRA-814SB*	*CRA-814SB*
Sample Identification (SO-17358-)		*030712-CB-159*	*030712-CB-160*	*030512-CB-126*	*030512-CB-127*	*032612-CB-257*	*032612-CB-258*	*032112-CB-216*	*032112-CB-217*	*032212-CB-234*	*032212-CB-235*	*030212-CB-115*	*030212-CB-116*	*030512-CB-121*	*030512-CB-122*	*032212-CB-232*	*032212-CB-233*	*032212-CB-236*	*032212-CB-237*
Sample Date		*3/7/2012*	*3/7/2012*	*3/5/2012*	*3/5/2012*	*3/26/2012*	*3/26/2012*	*3/21/2012*	*3/21/2012*	*3/22/2012*	*3/22/2012*	*3/2/2012*	*3/2/2012*	*3/5/2012*	*3/5/2012*	*3/22/2012*	*3/22/2012*	*3/22/2012*	*3/22/2012*
Sample Depth		*(1-3) ft BGS*	*(7-9) ft BGS*	*(2.5-4.5) ft BGS*	*(6-8) ft BGS*	*(3-5) ft BGS*	*(5.5-7.5) ft BGS*	*(1-3) ft BGS*	*(8-10) ft BGS*	*(0.5-2.5) ft BGS*	*(6-8) ft BGS*	*(0.5-2.5) ft BGS*	*(6-8) ft BGS*	*(1.5-3.5) ft BGS*	*(5-7) ft BGS*	*(0-2) ft BGS*	*(7.5-9.5) ft BGS*	*(0.5-2.5) ft BGS*	*(6.5-8.5) ft BGS*
Sample Type																			
	Units																		
Metals Continued																			
Manganese	mg/kg	**1100**[cd]	110	98	74	83 J	110 J	**670 J**[cd]	88 J	130	160	160	120	160	110	90	90	200	66
Mercury	mg/kg	0.019 J	0.044 U	0.041 U	0.047 U	0.042 U	0.044 U	**0.36 J**[d]	0.041 UJ	0.041 U	0.04 U	0.032 J	0.04 U	0.023 J	0.043 U	0.037 U	0.044 U	0.053 U	0.045 U
Nickel	mg/kg	9.9	4.7	7.1	6.2	5.7	6.9	8.8	4.6	5.5	5	7.4	4.8	6.9	7.8	4.1	4.7	7.4	7
Potassium	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Selenium	mg/kg	0.4	0.24	0.4	0.25	0.23 J	0.33 J	**1.1**[d]	0.2	0.27	0.21	0.35	0.18	0.31	0.27	0.23	**0.73**[d]	0.3	0.27
Silver	mg/kg	0.086 U	0.076 U	0.073 U	0.082 U	0.079 U	0.058 U	0.029 J	0.091 U	0.074 U	0.083 U	0.084 U	0.075 U	0.08 U	0.082 U	0.079 U	0.078 U	0.019 J	0.077 U
Sodium	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Thallium	mg/kg	0.1 U	0.076 U	0.12	0.04 J	0.081 U	0.095 U	0.3	0.11 U	0.094 U	0.1 U	0.084 U	0.075 U	0.056 J	0.09	0.1 U	0.086 U	0.12 U	0.077 U
Vanadium	mg/kg	15	6.2	6.3	11	7.7	5.4	13	4.7	6.9	5.8	14	6.5	9.7	9.8	5.3	5.9	8.7	6
Zinc	mg/kg	23	12	15	22	16	11	26	12	15	14	20	13	18	19	10	14	21	16
Polychlorinated biphenyls (PCBs)																			
Aroclor-1016 (PCB-1016)	mg/kg	0.036 U	0.038 U	0.034 U	0.036 U	0.035 U	0.034 U	0.038 U	0.038 U	0.035 U	0.036 U	0.037 U	0.034 U	0.036 U	0.037 U	0.035 U	0.037 U	0.39 U	0.036 U
Aroclor-1221 (PCB-1221)	mg/kg	0.036 U	0.038 U	0.034 U	0.036 U	0.035 U	0.034 U	0.038 U	0.038 U	0.035 U	0.036 U	0.037 U	0.034 U	0.036 U	0.037 U	0.035 U	0.037 U	0.39 U	0.036 U
Aroclor-1232 (PCB-1232)	mg/kg	0.036 U	0.038 U	0.034 U	0.036 U	0.035 U	0.034 U	0.038 U	0.038 U	0.035 U	0.036 U	0.037 U	0.034 U	0.036 U	0.037 U	0.035 U	0.037 U	0.39 U	0.036 U
Aroclor-1242 (PCB-1242)	mg/kg	0.036 U	0.038 U	0.034 U	0.036 U	0.035 U	0.034 U	0.038 U	0.038 U	0.035 U	0.036 U	0.037 U	0.034 U	0.036 U	0.037 U	0.035 U	0.02 J	0.39 U	0.036 U
Aroclor-1248 (PCB-1248)	mg/kg	0.036 U	0.038 U	0.034 U	0.036 U	0.035 U	0.034 U	0.038 U	0.038 U	0.035 U	0.036 U	0.037 U	0.034 U	0.036 U	0.037 U	0.035 U	0.037 U	0.39 U	0.036 U
Aroclor-1254 (PCB-1254)	mg/kg	0.036 U	0.038 U	0.034 U	0.036 U	0.035 U	0.034 U	0.038 U	0.038 U	0.035 U	0.036 U	0.037 U	0.034 U	0.036 U	0.037 U	0.035 U	0.037 U	0.39 U	0.036 U
Aroclor-1260 (PCB-1260)	mg/kg	0.036 U	0.038 U	0.034 U	0.036 U	0.035 U	0.034 U	0.16	0.038 U	0.035 U	0.036 U	0.037 U	0.034 U	0.036 U	0.037 U	0.021 J	0.24	0.39 U	0.036 U
Aroclor-1262 (PCB-1262)	mg/kg	-	-	-	-	0.035 U	0.034 U	-	-	-	-	-	-	-	-	-	-	-	-
Aroclor-1268 (PCB-1268)	mg/kg	-	-	-	-	0.035 U	0.034 U	-	-	-	-	-	-	-	-	-	-	-	-
Total PCBs	mg/kg	ND	ND	ND	ND	ND	ND	0.16	ND	ND	ND	ND	ND	ND	ND	0.021 J	0.26 J	ND	ND

Notes

Michigan Part 201 generic clean up criteria (updated September 28, 2012)

ID - Insufficient data to develop criterion

NLV - Hazardous substance is not likely to volatilize under most conditions

NA - Criterion or value is not available

Perimeter Status (1) - N - non-perimeter, Y - perimeter

mg/kg - milligram/kilogram

Notes:

U - Not detected at the associated reporting limit.

J - Estimated concentration.

UJ - Not detected; associated reporting limit is estimated.

R - Rejected

TABLE 3.8

PART 201 CRITERIA EXCEEDANCES - SOIL
2013 RFI REPORT
FORMER GENERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation		CENTRAL03	CENTRAL03	CENTRAL03	CENTRAL03	CENTRAL03	CENTRAL03	CENTRAL03	CENTRAL03	CENTRAL03	CENTRAL03	CENTRAL03	CENTRAL03	CENTRAL03	CENTRAL03	CENTRAL03	CENTRAL03	CENTRAL03
Perimeter Status (1)		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Sample Location		CRA-7111	CRA-7111	CRA-7111	CRA-744M	CRA-744M	CRA-744M	CRA-745M	CRA-745M	CRA-747SB	CRA-747SB	CRA-748SB	CRA-748SB	CRA-748SB	CRA-749M	CRA-749M	CRA-750M	CRA-750M	CRA-750M
Sample Identification (SO-17358-)		022712-DR-043	022712-DR-044	022712-DR-045	032112-CB-218	032112-CB-220	032112-CB-219	032312-CB-243	032312-CB-244	032112-CB-221	032112-CB-222	032312-CB-240	032312-CB-241	032312-CB-242	032112-CB-223	032112-CB-224	032112-CB-227	032112-CB-228	032112-CB-229
Sample Date		2/27/2012	2/27/2012	2/27/2012	3/21/2012	3/21/2012	3/21/2012	3/23/2012	3/23/2012	3/21/2012	3/21/2012	3/23/2012	3/23/2012	3/23/2012	3/21/2012	3/21/2012	3/21/2012	3/21/2012	3/21/2012
Sample Depth		(0-2) ft BGS	(0-2) ft BGS	(5-7) ft BGS	(0-2) ft BGS	(2-4) ft BGS	(5.5-7.5) ft BGS	(0.5-2.5) ft BGS	(5.5-7.5) ft BGS	(0.5-2.5) ft BGS	(6-8) ft BGS	(1.5-3.5) ft BGS	(7-9) ft BGS	(7-9) ft BGS	(0-2) ft BGS	(3-5) ft BGS	(0.5-2.5) ft BGS	(0.5-2.5) ft BGS	(4-6) ft BGS
Sample Type			Duplicate											Duplicate				Duplicate	
	Units																		
Volatile Organic Compounds (VOCs)																			
1,1,1-Trichloroethane	mg/kg	0.045 U	0.047 U	0.47 U	0.043 U	0.043 U	0.042 U	0.044 U	0.042 U	0.043 U	0.045 U	0.047 U	0.046 U	0.043 U	0.14 U	0.045 U	0.044 U	0.045 U	0.091 U
1,1,2,2-Tetrachloroethane	mg/kg	0.045 U	0.047 U	0.47 U	0.043 U	0.043 U	0.042 U	0.044 U	0.042 U	0.043 U	0.045 U	0.047 U	0.046 U	0.043 U	0.14 U	0.045 U	0.044 U	0.045 U	0.091 U
1,1,2-Trichloroethane	mg/kg	0.045 U	0.047 U	0.47 U	0.043 U	0.043 U	0.042 U	0.044 U	0.042 U	0.043 U	0.045 U	0.047 U	0.046 U	0.043 U	0.14 U	0.045 U	0.044 U	0.045 U	0.091 U
1,1-Dichloroethane	mg/kg	0.045 U	0.047 U	0.47 U	0.043 U	0.043 U	0.042 U	0.044 U	0.042 U	0.043 U	0.045 U	0.047 U	0.046 U	0.043 U	0.14 U	0.045 U	0.044 U	0.045 U	0.091 U
1,1-Dichloroethene	mg/kg	0.045 U	0.047 U	0.47 U	0.043 U	0.043 U	0.042 U	0.044 U	0.042 U	0.043 U	0.045 U	0.047 U	0.046 U	0.043 U	0.14 U	0.045 U	0.044 U	0.045 U	0.091 U
1,2,4-Trichlorobenzene	mg/kg	0.22 U	0.23 U	2.4 U	0.22 U	0.016 J	0.21 U	0.22 U	0.21 U	0.22 U	0.22 U	0.24 U	0.23 U	0.22 U	0.69 U	0.23 U	0.22 U	0.22 U	0.46 U
1,2-Dibromo-3-chloropropane (DBCP)	mg/kg	0.22 U	0.23 U	2.4 U	0.22 U	0.21 U	0.21 U	0.22 U	0.21 U	0.22 U	0.22 U	0.24 U	0.23 U	0.22 U	0.69 U	0.23 U	0.22 U	0.22 U	0.46 U
1,2-Dibromoethane (Ethylene dibromide)	mg/kg	0.22 U	0.23 U	2.4 U	0.22 U	0.21 U	0.21 U	0.22 U	0.21 U	0.22 U	0.22 U	0.24 U	0.23 U	0.22 U	0.69 U	0.23 U	0.22 U	0.22 U	0.46 U
1,2-Dichlorobenzene	mg/kg	0.089 U	0.093 U	0.95 U	0.087 U	0.086 U	0.085 U	0.089 U	0.085 U	0.086 U	0.089 U	0.095 U	0.091 U	0.086 U	0.27 U	0.091 U	0.089 U	0.09 U	0.18 U
1,2-Dichloroethane	mg/kg	0.045 U	0.047 U	0.47 U	0.043 U	0.043 U	0.042 U	0.044 U	0.042 U	0.043 U	0.045 U	0.047 U	0.046 U	0.043 U	0.14 U	0.045 U	0.044 U	0.045 U	0.091 U
1,2-Dichloropropane	mg/kg	0.045 U	0.047 U	0.47 U	0.043 U	0.043 U	0.042 U	0.044 U	0.042 U	0.043 U	0.045 U	0.047 U	0.046 U	0.043 U	0.14 U	0.045 U	0.044 U	0.045 U	0.091 U
1,3-Dichlorobenzene	mg/kg	0.089 U	0.093 U	0.95 U	0.087 U	0.086 U	0.085 U	0.089 U	0.085 U	0.086 U	0.089 U	0.095 U	0.091 U	0.086 U	0.27 U	0.091 U	0.089 U	0.09 U	0.18 U
1,4-Dichlorobenzene	mg/kg	0.089 U	0.093 U	0.95 U	0.087 U	0.086 U	0.085 U	0.089 U	0.085 U	0.086 U	0.089 U	0.095 U	0.091 U	0.086 U	0.27 U	0.091 U	0.089 U	0.09 U	0.18 U
2-Butanone (Methyl ethyl ketone) (MEK)	mg/kg	0.67 U	0.7 U	7.1 U	0.65 U	0.64 U	0.64 U	0.66 U	0.64 U	0.65 U	0.67 U	0.71 U	0.68 U	0.65 U	0.36 J	0.68 U	0.66 U	0.67 U	1.4 U
2-Hexanone	mg/kg	2.2 U	2.3 U	24 U	2.2 U	2.1 U	2.1 U	2.2 U	2.1 U	2.2 U	2.2 U	2.4 U	2.3 U	2.2 U	6.9 U	2.3 U	2.2 U	2.2 U	4.6 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	mg/kg	2.2 U	2.3 U	24 U	2.2 U	2.1 U	2.1 U	2.2 U	2.1 U	2.2 U	2.2 U	2.4 U	2.3 U	2.2 U	6.9 U	2.3 U	2.2 U	2.2 U	4.6 U
Acetone	mg/kg	0.67 U	0.7 U	7.1 U	0.65 U	0.64 U	0.64 U	0.66 U	0.64 U	0.65 U	0.67 U	0.71 U	0.68 U	0.65 U	1.2 J	0.68 U	0.66 U	0.67 U	1.4 U
Benzene	mg/kg	0.045 U	0.047 U	0.47 U	0.043 U	0.043 U	0.042 U	0.044 U	0.042 U	0.043 U	0.045 U	0.047 U	0.046 U	0.043 U	**0.56**[bc]	0.045 U	0.044 U	0.045 U	0.091 U
Bromodichloromethane	mg/kg	0.089 U	0.093 U	0.95 U	0.087 U	0.086 U	0.085 U	0.089 U	0.085 U	0.086 U	0.089 U	0.095 U	0.091 U	0.086 U	0.27 U	0.091 U	0.089 U	0.09 U	0.18 U
Bromoform	mg/kg	0.089 U	0.093 U	0.95 U	0.087 U	0.086 U	0.085 U	0.089 U	0.085 U	0.086 U	0.089 U	0.095 U	0.091 U	0.086 U	0.27 U	0.091 U	0.089 U	0.09 U	0.18 U
Bromomethane (Methyl bromide)	mg/kg	0.22 U	0.23 U	2.4 U	0.22 U	0.21 U	0.21 U	0.22 U	0.21 U	0.22 U	0.22 U	0.24 U	0.23 U	0.22 U	0.69 U	0.23 U	0.22 U	0.22 U	0.46 U
Carbon disulfide	mg/kg	0.22 U	0.23 U	2.4 U	0.22 U	0.025 J	0.21 U	0.22 U	0.21 U	0.22 U	0.22 U	0.016 J	0.23 U	0.22 U	0.69 U	0.23 U	0.22 U	0.22 U	0.46 U
Carbon tetrachloride	mg/kg	0.045 U	0.047 U	0.47 U	0.043 U	0.043 U	0.042 U	0.044 U	0.042 U	0.043 U	0.045 U	0.047 U	0.046 U	0.043 U	0.14 U	0.045 U	0.044 U	0.045 U	0.091 U
Chlorobenzene	mg/kg	0.045 U	0.047 U	0.47 U	0.043 U	0.043 U	0.042 U	0.044 U	0.042 U	0.043 U	0.045 U	0.047 U	0.046 U	0.043 U	0.14 U	0.045 U	0.044 U	0.045 U	0.091 U
Chloroethane	mg/kg	0.22 U	0.23 U	2.4 U	0.22 U	0.21 U	0.21 U	0.22 U	0.21 U	0.22 U	0.22 U	0.24 U	0.23 U	0.22 U	0.69 U	0.23 U	0.22 U	0.22 U	0.46 U
Chloroform (Trichloromethane)	mg/kg	0.045 U	0.047 U	0.47 U	0.043 U	0.043 U	0.042 U	0.044 U	0.042 U	0.043 U	0.045 U	0.047 U	0.046 U	0.043 U	0.14 U	0.045 U	0.044 U	0.045 U	0.091 U
Chloromethane (Methyl chloride)	mg/kg	0.22 U	0.23 U	2.4 U	0.22 U	0.21 U	0.21 U	0.22 U	0.21 U	0.22 U	0.22 U	0.24 U	0.23 U	0.22 U	0.69 U	0.23 U	0.22 U	0.22 U	0.46 U
cis-1,2-Dichloroethene	mg/kg	0.045 U	0.047 U	0.47 U	0.043 U	0.043 U	0.042 U	0.044 U	0.042 U	0.043 U	0.045 U	0.047 U	0.046 U	0.043 U	0.14 U	0.045 U	0.044 U	0.045 U	0.077 J
cis-1,3-Dichloropropene	mg/kg	0.045 U	0.047 U	0.47 U	0.043 U	0.043 U	0.042 U	0.044 U	0.042 U	0.043 U	0.045 U	0.047 U	0.046 U	0.043 U	0.14 U	0.045 U	0.044 U	0.045 U	0.091 U
Cyclohexane	mg/kg	1.1 U	1.1 U	11 U	1 U	1 U	1 U	1.1 U	1 U	1 U	1.1 U	1.1 U	1.1 U	1 U	1.4 J	1.1 U	1.1 U	1.1 U	2.2 U
Dibromochloromethane	mg/kg	0.045 U	0.047 U	0.47 U	0.043 U	0.043 U	0.042 U	0.044 U	0.042 U	0.043 U	0.045 U	0.047 U	0.046 U	0.043 U	0.14 U	0.045 U	0.044 U	0.045 U	0.091 U
Dichlorodifluoromethane (CFC-12)	mg/kg	0.089 U	0.093 U	0.95 U	0.087 U	0.086 U	0.085 U	0.089 U	0.085 U	0.086 U	0.089 U	0.095 U	0.091 U	0.086 U	0.27 U	0.091 U	0.089 U	0.09 U	0.18 U
Ethylbenzene	mg/kg	0.045 U	0.047 U	0.47 U	0.043 U	0.043 U	0.042 U	0.044 U	0.042 U	0.043 U	0.045 U	0.047 U	0.046 U	0.043 U	**1.2**[d]	0.045 U	0.044 U	0.045 U	0.091 U
Isopropyl benzene	mg/kg	0.22 U	0.23 U	2.4 U	0.22 U	0.21 U	0.21 U	0.22 U	0.21 U	0.22 U	0.22 U	0.24 U	0.23 U	0.22 U	0.72	0.23 U	0.22 U	0.22 U	0.46 U
Methyl acetate	mg/kg	1.1 U	1.1 U	11 U	0.033 J	0.34 J	1 U	1.1 U	1 U	1 U	1.1 U	0.42 J	1.1 U	1 U	1.2 J	0.21 J	1.1 U	1.1 U	2.2 U
Methyl cyclohexane	mg/kg	1.1 U	1.1 U	11 U	1 U	1 U	1 U	1.1 U	1 U	1 U	1.1 U	1.1 U	1.1 U	1 U	7.3	0.11 J	1.1 U	1.1 U	0.066 J
Methyl tert butyl ether (MTBE)	mg/kg	0.22 U	0.23 U	2.4 U	0.22 U	0.21 U	0.21 U	0.22 U	0.21 U	0.22 U	0.22 U	0.24 U	0.23 U	0.22 U	0.69 U	0.23 U	0.22 U	0.22 U	0.46 U
Methylene chloride	mg/kg	0.22 U	0.23 U	2.4 U	0.22 U	0.21 U	0.21 U	0.22 U	0.21 U	0.22 U	0.22 U	0.24 U	0.23 U	0.22 U	0.69 U	0.23 U	0.22 U	0.22 U	0.46 U
Styrene	mg/kg	0.045 U	0.047 U	0.47 U	0.043 U	0.043 U	0.042 U	0.044 U	0.042 U	0.043 U	0.045 U	0.047 U	0.046 U	0.043 U	0.14 U	0.045 U	0.044 U	0.045 U	0.091 U
Tetrachloroethene	mg/kg	0.045 U	0.047 U	**26**[bcdfg]	0.043 U	0.043 U	0.042 U	0.044 U	0.042 U	0.043 U	0.045 U	0.047 U	0.046 U	0.043 U	0.14 U	0.045 U	**0.85**[bc]	**0.87**[bc]	**4.7**[bcd]
Toluene	mg/kg	0.089 U	0.093 U	0.95 U	0.087 U	0.086 U	0.085 U	0.089 U	0.085 U	0.086 U	0.089 U	0.095 U	0.091 U	0.086 U	3.7	0.091 U	0.089 U	0.09 U	0.18 U
trans-1,2-Dichloroethene	mg/kg	0.045 U	0.047 U	0.47 U	0.043 U	0.043 U	0.042 U	0.044 U	0.042 U	0.043 U	0.045 U	0.047 U	0.046 U	0.043 U	0.14 U	0.045 U	0.044 U	0.045 U	0.091 U
trans-1,3-Dichloropropene	mg/kg	0.045 U	0.047 U	0.47 U	0.043 U	0.043 U	0.042 U	0.044 U	0.042 U	0.043 U	0.045 U	0.047 U	0.046 U	0.043 U	0.14 U	0.045 U	0.044 U	0.045 U	0.091 U
Trichloroethene	mg/kg	0.045 U	0.047 U	**0.24 J**[bc]	0.043 U	0.043 U	0.042 U	0.044 U	0.042 U	0.043 U	0.045 U	0.047 U	0.046 U	0.043 U	0.14 U	0.045 U	0.044 U	0.045 U	0.076 J

TABLE 3.8

PART 201 CRITERIA EXCEEDANCES - SOIL
2013 RFI REPORT
FORMER GENERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation		*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*
Perimeter Status (1)		*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*
Sample Location		*CRA-7111*	*CRA-7111*	*CRA-7111*	*CRA-744M*	*CRA-744M*	*CRA-744M*	*CRA-745M*	*CRA-745M*	*CRA-747SB*	*CRA-747SB*	*CRA-748SB*	*CRA-748SB*	*CRA-748SB*	*CRA-749M*	*CRA-749M*	*CRA-750M*	*CRA-750M*	*CRA-750M*
Sample Identification (SO-17358-)		*022712-DR-043*	*022712-DR-044*	*022712-DR-045*	*032112-CB-218*	*032112-CB-220*	*032112-CB-219*	*032312-CB-243*	*032312-CB-244*	*032112-CB-221*	*032112-CB-222*	*032312-CB-240*	*032312-CB-241*	*032312-CB-242*	*032112-CB-223*	*032112-CB-224*	*032112-CB-227*	*032112-CB-228*	*032112-CB-229*
Sample Date		*2/27/2012*	*2/27/2012*	*2/27/2012*	*3/21/2012*	*3/21/2012*	*3/21/2012*	*3/23/2012*	*3/23/2012*	*3/21/2012*	*3/21/2012*	*3/23/2012*	*3/23/2012*	*3/23/2012*	*3/21/2012*	*3/21/2012*	*3/21/2012*	*3/21/2012*	*3/21/2012*
Sample Depth		*(0-2) ft BGS*	*(0-2) ft BGS*	*(5-7) ft BGS*	*(0-2) ft BGS*	*(2-4) ft BGS*	*(5.5-7.5) ft BGS*	*(0.5-2.5) ft BGS*	*(5.5-7.5) ft BGS*	*(0.5-2.5) ft BGS*	*(6-8) ft BGS*	*(1.5-3.5) ft BGS*	*(7-9) ft BGS*	*(7-9) ft BGS*	*(0-2) ft BGS*	*(3-5) ft BGS*	*(0.5-2.5) ft BGS*	*(0.5-2.5) ft BGS*	*(4-6) ft BGS*
Sample Type			*Duplicate*											*Duplicate*				*Duplicate*	
	Units																		
VOCs Continued																			
Trichlorofluoromethane (CFC-11)	mg/kg	0.089 U	0.093 U	0.95 U	0.087 U	0.086 U	0.085 U	0.089 U	0.085 U	0.086 U	0.089 U	0.095 U	0.091 U	0.086 U	0.27 U	0.091 U	0.089 U	0.09 U	0.18 U
Trifluorotrichloroethane (Freon 113)	mg/kg	0.22 U	0.23 U	2.4 U	0.22 U	0.21 U	0.21 U	0.22 U	0.21 U	0.22 U	0.22 U	0.24 U	0.23 U	0.22 U	0.69 U	0.23 U	0.22 U	0.22 U	0.46 U
Vinyl chloride	mg/kg	0.036 U	0.037 U	0.38 U	0.035 U	0.034 U	0.034 U	0.035 U	0.034 U	0.035 U	0.036 U	0.038 U	0.036 U	0.034 U	0.11 U	0.036 U	0.035 U	0.036 U	0.073 U
Xylenes (total)	mg/kg	0.13 U	0.14 U	1.4 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.14 U	0.14 U	0.13 U	**6.7**[bcd]	0.14 U	0.13 U	0.13 U	0.27 U
Semi-Volatile Organic Compounds (SVOCs)																			
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	mg/kg	0.3 U	0.3 U	0.28 U	0.29 U	0.28 U	0.28 U	0.29 U	0.29 U	0.31 U	0.3 U	0.31 U	0.28 U	0.28 U	1.9 U	0.3 U	0.29 U	0.3 U	0.3 U
2,4,5-Trichlorophenol	mg/kg	0.3 U	0.3 U	0.28 U	0.29 U	0.28 U	0.28 U	0.29 U	0.29 U	0.31 U	0.3 U	0.31 U	0.28 U	0.28 U	1.9 U	0.3 U	0.29 U	0.3 U	0.3 U
2,4,6-Trichlorophenol	mg/kg	0.3 U	0.3 U	0.28 U	0.29 U	0.28 U	0.28 U	0.29 U	0.29 U	0.31 U	0.3 U	0.31 U	0.28 U	0.28 U	1.9 U	0.3 U	0.29 U	0.3 U	0.3 U
2,4-Dichlorophenol	mg/kg	0.3 U	0.3 U	0.28 U	0.29 U	0.28 U	0.28 U	0.29 U	0.29 U	0.31 U	0.3 U	0.31 U	0.28 U	0.28 U	1.9 U	0.3 U	0.29 U	0.3 U	0.3 U
2,4-Dimethylphenol	mg/kg	0.3 U	0.3 U	0.28 U	0.29 U	0.28 U	0.28 U	0.29 U	0.29 U	0.31 U	0.3 U	0.31 U	0.28 U	0.28 U	1.9 U	0.3 U	0.29 U	0.3 U	0.3 U
2,4-Dinitrophenol	mg/kg	0.17 U	R	0.16 U	0.16 U	0.16 U	0.16 U	0.17 U	0.16 U	0.17 U	0.17 U	0.18 U	0.16 U	0.16 U	1.1 U	0.17 U	0.16 U	0.17 U	0.17 U
2,4-Dinitrotoluene	mg/kg	0.3 U	0.3 U	0.28 U	0.29 U	0.28 U	0.28 U	0.29 U	0.29 U	0.31 U	0.3 U	0.31 U	0.28 U	0.28 U	1.9 U	0.3 U	0.29 U	0.3 U	0.3 U
2,6-Dinitrotoluene	mg/kg	0.3 U	0.3 U	0.28 U	0.29 U	0.28 U	0.28 U	0.29 U	0.29 U	0.31 U	0.3 U	0.31 U	0.28 U	0.28 U	1.9 U	0.3 U	0.29 U	0.3 U	0.3 U
2-Chloronaphthalene	mg/kg	0.3 U	0.3 U	0.28 U	0.29 U	0.28 U	0.28 U	0.29 U	0.29 U	0.31 U	0.3 U	0.31 U	0.28 U	0.28 U	1.9 U	0.3 U	0.29 U	0.3 U	0.3 U
2-Chlorophenol	mg/kg	0.3 U	0.3 U	0.28 U	0.29 U	0.28 U	0.28 U	0.29 U	0.29 U	0.31 U	0.3 U	0.31 U	0.28 U	0.28 U	1.9 U	0.3 U	0.29 U	0.3 U	0.3 U
2-Methylnaphthalene	mg/kg	0.3 U	0.3 U	0.016 J	0.0056 J	0.28 U	0.28 U	0.29 U	0.29 U	0.31 U	0.3 U	0.31 U	0.28 U	0.0038 J	**7.1**[d]	0.3 U	0.088 J	0.046 J	0.3 U
2-Methylphenol	mg/kg	0.3 U	0.3 U	0.28 U	0.29 U	0.28 U	0.28 U	0.29 U	0.29 U	0.31 U	0.3 U	0.31 U	0.28 U	0.28 U	1.9 U	0.3 U	0.29 U	0.3 U	0.3 U
2-Nitroaniline	mg/kg	0.22 U	0.23 U	0.21 U	0.22 U	0.21 U	0.21 U	0.22 U	0.22 U	0.23 U	0.23 U	0.24 U	0.21 U	0.21 U	1.4 U	0.23 U	0.22 U	0.22 U	0.23 U
2-Nitrophenol	mg/kg	0.3 U	0.3 U	0.28 U	0.29 U	0.28 U	0.28 U	0.29 U	0.29 U	0.31 U	0.3 U	0.31 U	0.28 U	0.28 U	1.9 U	0.3 U	0.29 U	0.3 U	0.3 U
3&4-Methylphenol	mg/kg	0.3 U	0.3 U	0.28 U	0.29 U	0.28 U	0.28 U	0.29 U	0.29 U	0.31 U	0.3 U	0.31 U	0.28 U	0.28 U	1.9 U	0.3 U	0.29 U	0.3 U	0.3 U
3,3'-Dichlorobenzidine	mg/kg	1.8 UJ	1.8 UJ	1.7 UJ	1.7 U	1.7 U	1.7 U	1.8 U	1.7 U	1.9 U	1.8 U	1.9 U	1.7 U	1.7 U	11 U	1.8 U	1.8 U	1.8 U	1.8 U
3-Nitroaniline	mg/kg	0.22 U	0.23 U	0.21 U	0.22 U	0.21 U	0.21 U	0.22 U	0.22 U	0.23 U	0.23 U	0.24 U	0.21 U	0.21 U	1.4 U	0.23 U	0.22 U	0.22 U	0.23 U
4,6-Dinitro-2-methylphenol	mg/kg	0.17 U	0.17 U	0.16 U	0.16 U	0.16 U	0.16 U	0.17 U	0.16 U	0.17 U	0.17 U	0.18 U	0.16 U	0.16 U	1.1 U	0.17 U	0.16 U	0.17 U	0.17 U
4-Bromophenyl phenyl ether	mg/kg	0.3 U	0.3 U	0.28 U	0.29 U	0.28 U	0.28 U	0.29 U	0.29 U	0.31 U	0.3 U	0.31 U	0.28 U	0.28 U	1.9 U	0.3 U	0.29 U	0.3 U	0.3 U
4-Chloro-3-methylphenol	mg/kg	0.3 U	0.3 U	0.28 U	0.29 U	0.28 U	0.28 U	0.29 U	0.29 U	0.31 U	0.3 U	0.31 U	0.28 U	0.28 U	1.9 U	0.3 U	0.29 U	0.3 U	0.3 U
4-Chloroaniline	mg/kg	0.22 U	0.23 U	0.21 U	0.22 U	0.21 U	0.21 U	0.22 U	0.22 U	0.23 U	0.23 U	0.24 U	0.21 U	0.21 U	1.4 U	0.23 U	0.22 U	0.22 U	0.23 U
4-Chlorophenyl phenyl ether	mg/kg	0.3 U	0.3 U	0.28 U	0.29 U	0.28 U	0.28 U	0.29 U	0.29 U	0.31 U	0.3 U	0.31 U	0.28 U	0.28 U	1.9 U	0.3 U	0.29 U	0.3 U	0.3 U
4-Nitroaniline	mg/kg	0.22 U	0.23 U	0.21 U	0.22 U	0.21 U	0.21 U	0.22 U	0.22 U	0.23 U	0.23 U	0.24 U	0.21 U	0.21 U	1.4 U	0.23 U	0.22 U	0.22 U	0.23 U
4-Nitrophenol	mg/kg	0.37 U	0.38 U	0.34 U	0.36 U	0.35 U	0.35 U	0.36 U	0.36 U	0.38 U	0.38 U	0.39 U	0.35 U	0.34 U	2.4 U	0.37 U	0.36 U	0.37 U	0.38 U
Acenaphthene	mg/kg	0.3 U	0.3 U	0.28 U	0.29 U	0.28 U	0.28 U	0.29 U	0.29 U	0.31 U	0.3 U	0.31 U	0.28 U	0.28 U	1.9 U	0.3 U	0.29 U	0.3 U	0.3 U
Acenaphthylene	mg/kg	0.3 U	0.3 U	0.28 U	0.29 U	0.28 U	0.28 U	0.29 U	0.29 U	0.31 U	0.3 U	0.31 U	0.28 U	0.28 U	0.6 J	0.3 U	0.29 U	0.3 U	0.3 U
Acetophenone	mg/kg	0.3 U	0.3 U	0.28 U	0.29 U	0.28 U	0.28 U	0.29 U	0.29 U	0.31 U	0.3 U	0.31 U	0.28 U	0.28 U	0.75 J	0.3 U	0.29 U	0.3 U	0.3 U
Anthracene	mg/kg	0.3 U	0.3 U	0.28 U	0.29 U	0.28 U	0.28 U	0.29 U	0.29 U	0.31 U	0.3 U	0.31 U	0.28 U	0.28 U	0.64 J	0.3 U	0.29 U	0.3 U	0.3 U
Atrazine	mg/kg	0.045 U	0.046 U	0.042 U	0.044 U	0.043 U	0.043 U	0.044 U	0.044 U	0.046 U	0.046 U	0.047 U	0.042 U	0.042 U	0.29 U	0.045 U	0.044 U	0.045 U	0.046 U
Benzaldehyde	mg/kg	0.3 U	0.3 U	0.28 U	0.29 U	0.28 U	0.28 U	0.29 U	0.29 U	0.31 U	0.3 U	0.31 U	0.28 U	0.28 U	1.9 U	0.3 U	0.29 U	0.3 U	0.3 U
Benzo(a)anthracene	mg/kg	0.0046 J	0.3 U	0.28 U	0.0067 J	0.28 U	0.28 U	0.29 U	0.29 U	0.31 U	0.3 U	0.31 U	0.28 U	0.28 U	1.9	0.3 U	0.0089 J	0.3 U	0.0071 J
Benzo(a)pyrene	mg/kg	0.3 U	0.3 U	0.28 U	0.0065 J	0.28 U	0.28 U	0.0073 J	0.29 U	0.31 U	0.3 U	0.31 U	0.28 U	0.28 U	1.6 J	0.3 U	0.0055 J	0.3 U	0.0045 J
Benzo(b)fluoranthene	mg/kg	0.0054 J	0.3 U	0.28 U	0.02 J	0.016 J	0.28 U	0.0089 J	0.29 U	0.014 J	0.3 U	0.0086 J	0.28 U	0.28 U	3	0.3 U	0.021 J	0.014 J	0.015 J
Benzo(g,h,i)perylene	mg/kg	0.3 U	0.3 U	0.28 U	0.29 U	0.28 U	0.28 U	0.29 U	0.29 U	0.31 U	0.3 U	0.31 U	0.005 J	0.0056 J	0.99 J	0.3 U	0.011 J	0.3 U	0.3 U
Benzo(k)fluoranthene	mg/kg	0.3 U	0.3 U	0.28 U	0.0065 J	0.28 U	0.28 U	0.0081 J	0.29 U	0.31 U	0.3 U	0.31 U	0.28 U	0.28 U	1.2 J	0.3 U	0.29 U	0.3 U	0.3 U
Biphenyl (1,1-Biphenyl)	mg/kg	0.3 U	0.3 U	0.28 U	0.29 U	0.28 U	0.28 U	0.29 U	0.29 U	0.31 U	0.3 U	0.31 U	0.28 U	0.28 U	0.54 J	0.3 U	0.29 U	0.3 U	0.3 U
bis(2-Chloroethoxy)methane	mg/kg	0.3 U	0.3 U	0.28 U	0.29 U	0.28 U	0.28 U	0.29 U	0.29 U	0.31 U	0.3 U	0.31 U	0.28 U	0.28 U	1.9 U	0.3 U	0.29 U	0.3 U	0.3 U
bis(2-Chloroethyl)ether	mg/kg	0.09 U	0.092 U	0.084 U	0.087 U	0.086 U	0.085 U	0.088 U	0.087 U	0.093 U	0.091 U	0.094 U	0.084 U	0.084 U	0.57 U	0.09 U	0.088 U	0.09 U	0.091 U
bis(2-Ethylhexyl)phthalate (DEHP)	mg/kg	0.035 J	0.029 J	0.022 J	0.29 U	0.28 U	0.28 U	0.29 U	0.29 U	0.31 U	0.3 U	0.31 U	0.28 U	0.28 U	1.9 U	0.3 U	0.29 U	0.3 U	0.3 U

TABLE 3.8

PART 201 CRITERIA EXCEEDANCES - SOIL
2013 RFI REPORT
FORMER GENERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation		CENTRAL03	CENTRAL03	CENTRAL03	CENTRAL03	CENTRAL03	CENTRAL03	CENTRAL03	CENTRAL03	CENTRAL03	CENTRAL03	CENTRAL03	CENTRAL03	CENTRAL03	CENTRAL03	CENTRAL03	CENTRAL03	CENTRAL03
Perimeter Status (1)		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Sample Location		CRA-7111	CRA-7111	CRA-7111	CRA-744M	CRA-744M	CRA-744M	CRA-745M	CRA-745M	CRA-747SB	CRA-747SB	CRA-748SB	CRA-748SB	CRA-748SB	CRA-749M	CRA-749M	CRA-750M	CRA-750M	CRA-750M
Sample Identification (SO-17358-)		022712-DR-043	022712-DR-044	022712-DR-045	032112-CB-218	032112-CB-220	032112-CB-219	032312-CB-243	032312-CB-244	032112-CB-221	032112-CB-222	032312-CB-240	032312-CB-241	032312-CB-242	032112-CB-223	032112-CB-224	032112-CB-227	032112-CB-228	032112-CB-229
Sample Date		2/27/2012	2/27/2012	2/27/2012	3/21/2012	3/21/2012	3/21/2012	3/23/2012	3/23/2012	3/21/2012	3/21/2012	3/23/2012	3/23/2012	3/23/2012	3/21/2012	3/21/2012	3/21/2012	3/21/2012	3/21/2012
Sample Depth		(0-2) ft BGS	(0-2) ft BGS	(5-7) ft BGS	(0-2) ft BGS	(2-4) ft BGS	(5.5-7.5) ft BGS	(0.5-2.5) ft BGS	(5.5-7.5) ft BGS	(0.5-2.5) ft BGS	(6-8) ft BGS	(1.5-3.5) ft BGS	(7-9) ft BGS	(7-9) ft BGS	(0-2) ft BGS	(3-5) ft BGS	(0.5-2.5) ft BGS	(0.5-2.5) ft BGS	(4-6) ft BGS
Sample Type			Duplicate											Duplicate				Duplicate	
	Units																		
SVOCs Continued																			
Butyl benzylphthalate (BBP)	mg/kg	0.3 U	0.3 U	0.28 U	0.29 U	0.28 U	0.28 U	0.29 U	0.29 U	0.31 U	0.3 U	0.31 U	0.28 U	0.28 U	1.9 U	0.3 U	0.29 U	0.3 U	0.3 U
Caprolactam	mg/kg	0.3 U	0.3 U	0.28 U	0.29 U	0.28 U	0.28 U	0.29 U	0.29 U	0.31 U	0.3 U	0.31 U	0.28 U	0.28 U	1.9 U	0.3 U	0.29 U	0.3 U	0.3 U
Carbazole	mg/kg	0.3 U	0.3 U	0.28 U	0.29 U	0.28 U	0.28 U	0.29 U	0.29 U	0.31 U	0.3 U	0.31 U	0.28 U	0.28 U	0.24 J	0.3 U	0.29 U	0.3 U	0.3 U
Chrysene	mg/kg	0.0055 J	0.3 U	0.0097 J	0.015 J	0.28 U	0.28 U	0.29 U	0.29 U	0.31 U	0.3 U	0.31 U	0.28 U	0.01 J	1.7 J	0.3 U	0.018 J	0.3 U	0.0076 J
Dibenz(a,h)anthracene	mg/kg	0.3 U	0.3 U	0.28 U	0.29 U	0.28 U	0.28 U	0.29 U	0.29 U	0.31 U	0.3 U	0.31 U	0.28 U	0.28 U	1.9 U	0.3 U	0.29 U	0.3 U	0.3 U
Dibenzofuran	mg/kg	0.3 U	0.3 U	0.28 U	0.29 U	0.28 U	0.28 U	0.29 U	0.29 U	0.31 U	0.3 U	0.31 U	0.28 U	0.28 U	1.4 J	0.3 U	0.019 J	0.0092 J	0.3 U
Diethyl phthalate	mg/kg	0.3 U	0.3 U	0.28 U	0.29 U	0.28 U	0.28 U	0.29 U	0.29 U	0.31 U	0.3 U	0.31 U	0.28 U	0.28 U	1.9 U	0.3 U	0.29 U	0.3 U	0.3 U
Dimethyl phthalate	mg/kg	0.3 U	0.3 U	0.28 U	0.29 U	0.28 U	0.28 U	0.29 U	0.29 U	0.31 U	0.3 U	0.31 U	0.28 U	0.28 U	1.9 U	0.3 U	0.29 U	0.3 U	0.3 U
Di-n-butylphthalate (DBP)	mg/kg	0.3 U	0.3 U	0.28 U	0.29 U	0.28 U	0.28 U	0.29 U	0.29 U	0.31 U	0.3 U	0.31 U	0.28 U	0.28 U	1.9 U	0.3 U	0.29 U	0.3 U	0.3 U
Di-n-octyl phthalate (DnOP)	mg/kg	0.3 U	0.3 U	0.28 U	0.29 U	0.28 U	0.28 U	0.29 U	0.29 U	0.31 U	0.3 U	0.31 U	0.28 U	0.28 U	1.9 U	0.3 U	0.29 U	0.3 U	0.3 U
Fluoranthene	mg/kg	0.0083 J	0.0062 J	0.0045 J	0.012 J	0.0073 J	0.28 U	0.018 J	0.29 U	0.0049 J	0.3 U	0.0094 J	0.28 U	0.28 U	2.2	0.006 J	0.01 J	0.0048 J	0.013 J
Fluorene	mg/kg	0.3 U	0.3 U	0.28 U	0.29 U	0.28 U	0.28 U	0.29 U	0.29 U	0.31 U	0.3 U	0.31 U	0.28 U	0.28 U	0.14 J	0.3 U	0.29 U	0.3 U	0.3 U
Hexachlorobenzene	mg/kg	0.3 U	0.3 U	0.28 U	0.29 U	0.28 U	0.28 U	0.29 U	0.29 U	0.31 U	0.3 U	0.31 U	0.28 U	0.28 U	1.9 U	0.3 U	0.29 U	0.3 U	0.3 U
Hexachlorobutadiene	mg/kg	0.045 U	0.046 U	0.042 U	0.044 U	0.043 U	0.043 U	0.044 U	0.044 U	0.046 U	0.046 U	0.047 U	0.042 U	0.042 U	0.29 U	0.045 U	0.044 U	0.045 U	0.046 U
Hexachlorocyclopentadiene	mg/kg	0.3 U	R	0.28 U	0.29 U	0.28 U	0.28 U	0.29 U	0.29 U	0.31 U	0.3 U	0.31 U	0.28 U	0.28 U	1.9 U	0.3 U	0.29 U	0.3 U	0.3 U
Hexachloroethane	mg/kg	0.3 U	0.3 U	0.28 U	0.29 U	0.28 U	0.28 U	0.29 U	0.29 U	0.31 U	0.3 U	0.31 U	0.28 U	0.28 U	1.9 U	0.3 U	0.29 U	0.3 U	0.3 U
Indeno(1,2,3-cd)pyrene	mg/kg	0.3 U	0.3 U	0.28 U	0.29 U	0.28 U	0.28 U	0.0061 J	0.29 U	0.31 U	0.3 U	0.31 U	0.28 U	0.28 U	0.81 J	0.3 U	0.29 U	0.3 U	0.3 U
Isophorone	mg/kg	0.3 U	0.3 U	0.28 U	0.29 U	0.28 U	0.28 U	0.29 U	0.29 U	0.31 U	0.3 U	0.31 U	0.28 U	0.28 U	1.9 U	0.3 U	0.29 U	0.3 U	0.3 U
Naphthalene	mg/kg	0.3 U	0.3 U	0.28 U	0.0038 J	0.28 U	0.28 U	0.29 U	0.29 U	0.31 U	0.3 U	0.31 U	0.28 U	0.28 U	**4.8**[d]	0.3 U	0.051 J	0.029 J	0.3 U
Nitrobenzene	mg/kg	0.3 U	0.3 U	0.28 U	0.29 U	0.28 U	0.28 U	0.29 U	0.29 U	0.31 U	0.3 U	0.31 U	0.28 U	0.28 U	1.9 U	0.3 U	0.29 U	0.3 U	0.3 U
N-Nitrosodi-n-propylamine	mg/kg	0.3 U	0.3 U	0.28 U	0.29 U	0.28 U	0.28 U	0.29 U	0.29 U	0.31 U	0.3 U	0.31 U	0.28 U	0.28 U	1.9 U	0.3 U	0.29 U	0.3 U	0.3 U
N-Nitrosodiphenylamine	mg/kg	0.3 U	0.3 U	0.28 U	0.29 U	0.28 U	0.28 U	0.29 U	0.29 U	0.31 U	0.3 U	0.31 U	0.28 U	0.28 U	1.9 U	0.3 U	0.29 U	0.3 U	0.3 U
Pentachlorophenol	mg/kg	0.17 U	0.17 U	0.16 U	0.16 U	0.16 U	0.16 U	0.17 U	0.16 U	0.17 U	0.17 U	0.18 U	0.16 U	0.16 U	1.1 U	0.17 U	0.16 U	0.17 U	0.17 U
Phenanthrene	mg/kg	0.0071 J	0.0066 J	0.0082 J	0.29 U	0.0053 J	0.28 U	0.013 J	0.29 U	0.31 U	0.3 U	0.0053 J	0.008 J	0.28 U	**2.9**[d]	0.3 U	0.054 J	0.023 J	0.013 J
Phenol	mg/kg	0.3 U	0.3 U	0.28 U	0.29 U	0.28 U	0.28 U	0.29 U	0.29 U	0.31 U	0.3 U	0.31 U	0.28 U	0.28 U	1.9 U	0.3 U	0.29 U	0.3 U	0.3 U
Pyrene	mg/kg	0.0068 J	0.0056 J	0.0068 J	0.011 J	0.0058 J	0.28 U	0.013 J	0.29 U	0.0045 J	0.3 U	0.0076 J	0.0059 J	0.0092 J	2.1	0.0051 J	0.014 J	0.0076 J	0.012 J
Metals																			
Aluminum	mg/kg	5900	5600	1600	6900	5600	1800	**8100**[bc]	1500	4300	1300	5800	2000	2100	2800	4200	1700	1800	5900
Antimony	mg/kg	0.066 J	0.048 J	0.039 J	0.067 J	0.045 J	0.076 J	0.036 J	0.044 J	0.027 J	0.041 J	0.071 J	0.076 J	0.076 J	0.14 J	0.034 J	0.044 J	0.052 J	0.047 J
Arsenic	mg/kg	**6**[bcd]	4.1	5.3	4.7	3.1	2.1	2.6	1.6	2.9	3	4	3.4	2.4	**9.1**[bcdp]	**6.6**[bcd]	3 J	**40 J**[bcdpq]	4.4
Barium	mg/kg	57	62	6.7	36	35	6.3	33	4.8	26	6.5	51	6.1	8.1	31	42	6.7	9.3	35
Beryllium	mg/kg	0.33	0.26	0.082 J	0.33	0.3	0.16 U	1.2	0.09 J	0.23	0.044 J	0.3	0.11 J	0.1 J	0.34	0.24	0.072 J	0.098 J	0.22
Cadmium	mg/kg	0.22	0.16	0.11	0.13	0.18	0.09	0.25	0.075 J	0.16	0.077 J	0.2	0.1	0.12	0.26	0.15	0.078	0.11	0.048 J
Calcium	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chromium	mg/kg	11	9.6	4.2	13	9.5	5.1	12	3.8	7.4	3.7	9.3	5.2	5.8	11	9.3	4.5	5	11
Chromium III (trivalent)	mg/kg	-	-	-	-	-	-	12	3.8	-	-	-	-	-	-	-	-	-	-
Chromium VI (hexavalent)	mg/kg	-	-	-	-	-	-	0.88 U	0.88 U	-	-	-	-	-	-	-	-	-	-
Cobalt	mg/kg	4.1	3.5	1.9	5.9	2.6	1.9	**11**[bcd]	2	2.4	1.7	3	2.5	2.6	5.3	3.8	2.4	3.1	3.1
Copper	mg/kg	11	7.4	5.9	19	7.8	5.5	36	4.9	6.8	4.3	9.2	12	8.4	14	4.9	4.9	8.4	4.7
Iron	mg/kg	**14000**[bc]	11000	4600	**14000**[bc]	8500	4400	9400	4200	7300	5900	10000	5000	5000	9400	**13000**[bc]	5100 J	**20000 J**[bc]	**13000**[bc]
Lead	mg/kg	6	5.3	2.7	7	6.4	3.3	5.1	2.6	6.7	2.5	7.4	3.1	2.7	13	7.3	3.1	3.6	4.3
Lead - coarse fraction	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lead - fine fraction	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lead - total (calculated by fine/coarse fraction)	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Magnesium	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

TABLE 3.8

PART 201 CRITERIA EXCEEDANCES - SOIL
2013 RFI REPORT
FORMER GENERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation		*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*
Perimeter Status (1)		*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*
Sample Location		*CRA-7111*	*CRA-7111*	*CRA-7111*	*CRA-744M*	*CRA-744M*	*CRA-744M*	*CRA-745M*	*CRA-745M*	*CRA-747SB*	*CRA-747SB*	*CRA-748SB*	*CRA-748SB*	*CRA-748SB*	*CRA-749M*	*CRA-749M*	*CRA-750M*	*CRA-750M*	*CRA-750M*
Sample Identification (SO-17358-)		*022712-DR-043*	*022712-DR-044*	*022712-DR-045*	*032112-CB-218*	*032112-CB-220*	*032112-CB-219*	*032312-CB-243*	*032312-CB-244*	*032112-CB-221*	*032112-CB-222*	*032312-CB-240*	*032312-CB-241*	*032312-CB-242*	*032112-CB-223*	*032112-CB-224*	*032112-CB-227*	*032112-CB-228*	*032112-CB-229*
Sample Date		*2/27/2012*	*2/27/2012*	*2/27/2012*	*3/21/2012*	*3/21/2012*	*3/21/2012*	*3/23/2012*	*3/23/2012*	*3/21/2012*	*3/21/2012*	*3/23/2012*	*3/23/2012*	*3/23/2012*	*3/21/2012*	*3/21/2012*	*3/21/2012*	*3/21/2012*	*3/21/2012*
Sample Depth		*(0-2) ft BGS*	*(0-2) ft BGS*	*(5-7) ft BGS*	*(0-2) ft BGS*	*(2-4) ft BGS*	*(5.5-7.5) ft BGS*	*(0.5-2.5) ft BGS*	*(5.5-7.5) ft BGS*	*(0.5-2.5) ft BGS*	*(6-8) ft BGS*	*(1.5-3.5) ft BGS*	*(7-9) ft BGS*	*(7-9) ft BGS*	*(0-2) ft BGS*	*(3-5) ft BGS*	*(0.5-2.5) ft BGS*	*(0.5-2.5) ft BGS*	*(4-6) ft BGS*
Sample Type			*Duplicate*											*Duplicate*				*Duplicate*	
	Units																		
Metals Continued																			
Manganese	mg/kg	**470**[bcd]	**650**[bcd]	150	280 J	210 J	170 J	110	**470**[bcd]	130 J	140 J	370	190	180	240 J	280 J	150 J	190 J	81 J
Mercury	mg/kg	0.022 J	0.025 J	0.04 U	0.11 J	0.021 J	0.04 UJ	0.041 J	0.048 U	0.028 J	0.044 UJ	0.051	0.016 J	0.017 J	0.045 UJ	0.036 J	0.039 UJ	0.046 UJ	0.047 UJ
Nickel	mg/kg	11	9.1	5.5	15	7.3	6.4	24	7.6	5.8	5.2	7	8.3	7.9	14	6.8	7.9	8.4	9
Potassium	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Selenium	mg/kg	0.39	0.25	0.21	0.35	**0.59**[d]	0.18	**1.7**[d]	0.19	**0.52**[d]	0.27	**0.68**[d]	**0.5**[d]	**0.45**[d]	**0.9**[d]	0.4	0.19	0.27	0.25
Silver	mg/kg	0.022 J	0.091 U	0.016 J	0.073 U	0.024 J	0.082 U	0.015 J	0.081 U	0.018 J	0.079 U	0.03 J	0.016 J	0.015 J	0.027 J	0.079 U	0.069 U	0.016 J	0.076 U
Sodium	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Thallium	mg/kg	0.086 U	0.099 U	0.099 U	0.16	0.073 U	0.13 U	0.093	0.063 J	0.071 U	0.08 U	0.14	0.21	0.2	0.16	0.079 U	0.083 U	0.1 U	0.076 U
Vanadium	mg/kg	18	15	5.6	21	13	5.5	11	6	12	4.6	14	8.1	7.9	8.8	17	5.7	7.7	17
Zinc	mg/kg	24	23	12	31	25	13	57	13	22	13	26	16	16	38	23	18	18	26
Polychlorinated biphenyls (PCBs)																			
Aroclor-1016 (PCB-1016)	mg/kg	0.037 U	0.038 U	0.034 U	0.036 U	0.035 U	0.035 U	0.036 U	0.036 U	0.038 U	0.038 U	0.039 U	0.035 U	0.035 U	0.035 U	0.037 U	0.036 U	0.037 U	0.038 U
Aroclor-1221 (PCB-1221)	mg/kg	0.037 U	0.038 U	0.034 U	0.036 U	0.035 U	0.035 U	0.036 U	0.036 U	0.038 U	0.038 U	0.039 U	0.035 U	0.035 U	0.035 U	0.037 U	0.036 U	0.037 U	0.038 U
Aroclor-1232 (PCB-1232)	mg/kg	0.037 U	0.038 U	0.034 U	0.036 U	0.035 U	0.035 U	0.036 U	0.036 U	0.038 U	0.038 U	0.039 U	0.035 U	0.035 U	0.035 U	0.037 U	0.036 U	0.037 U	0.038 U
Aroclor-1242 (PCB-1242)	mg/kg	0.037 U	0.038 U	0.034 U	0.036 U	0.035 U	0.035 U	0.036 U	0.036 U	0.038 U	0.038 U	0.039 U	0.035 U	0.035 U	0.035 U	0.037 U	0.036 U	0.037 U	0.038 U
Aroclor-1248 (PCB-1248)	mg/kg	0.037 U	0.038 U	0.034 U	0.036 U	0.035 U	0.035 U	0.036 U	0.036 U	0.038 U	0.038 U	0.039 U	0.035 U	0.035 U	0.035 U	0.037 U	0.036 U	0.037 U	0.038 U
Aroclor-1254 (PCB-1254)	mg/kg	0.037 U	0.038 U	0.034 U	0.036 U	0.035 U	0.035 U	0.036 U	0.036 U	0.038 U	0.038 U	0.039 U	0.035 U	0.035 U	0.035 U	0.037 U	0.036 U	0.037 U	0.038 U
Aroclor-1260 (PCB-1260)	mg/kg	0.037 U	0.038 U	0.034 U	0.036 U	0.035 U	0.035 U	0.036 U	0.036 U	0.038 U	0.038 U	0.039 U	0.035 U	0.035 U	0.035 U	0.037 U	0.036 U	0.037 U	0.038 U
Aroclor-1262 (PCB-1262)	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Aroclor-1268 (PCB-1268)	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total PCBs	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Notes

Michigan Part 201 generic clean up criteria (updated September 28, 2012)

ID - Insufficient data to develop criterion

NLV - Hazardous substance is not likely to volatilize under most conditions

NA - Criterion or value is not available

Perimeter Status (1) - N - non-perimeter, Y - perimeter

mg/kg - milligram/kilogram

Notes:

U - Not detected at the associated reporting limit.

J - Estimated concentration.

UJ - Not detected; associated reporting limit is estimated.

R - Rejected

TABLE 3.8

PART 201 CRITERIA EXCEEDANCES - SOIL
2013 RFI REPORT
FORMER GENERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation		*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*
Perimeter Status (1)		*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*
Sample Location		*CRA-751M*	*CRA-751M*	*CRA-752M*	*CRA-752M*	*CRA-753M*	*CRA-753M*	*CRA-784I*	*CRA-784I*	*CRA-847SB*	*CRA-847SB*	*CRA-847SB*	*CRA-854SB*	*CRA-854SB*	*CRA-855SB*	*CRA-855SB*	*CRA-856SB*	*CRA-856SB*
Sample Identification (SO-17358-)		*032112-CB-225*	*032112-CB-226*	*032312-CB-245*	*032312-CB-246*	*032212-CB-238*	*032212-CB-239*	*031512-DR-072*	*031512-DR-073*	*032113-DR-022*	*032113-DR-023*	*032113-DR-024*	*032113-DR-003*	*032113-DR-004*	*032113-DR-005*	*032113-DR-006*	*032113-DR-007*	*032113-DR-009*
Sample Date		*3/21/2012*	*3/21/2012*	*3/23/2012*	*3/23/2012*	*3/22/2012*	*3/22/2012*	*3/15/2012*	*3/15/2012*	*3/21/2013*	*3/21/2013*	*3/21/2013*	*3/21/2013*	*3/21/2013*	*3/21/2013*	*3/21/2013*	*3/21/2013*	*3/21/2013*
Sample Depth		*(0.5-2.5) ft BGS*	*(6.5-8.5) ft BGS*	*(1.5-3.5) ft BGS*	*(7-9) ft BGS*	*(0.5-2.5) ft BGS*	*(7.5-9.5) ft BGS*	*(0-2) ft BGS*	*(2-4) ft BGS*	*(0-2) ft BGS*	*(2-4) ft BGS*	*(4-5) ft BGS*	*(0-2) ft BGS*	*(3-5) ft BGS*	*(1-3) ft BGS*	*(4-6) ft BGS*	*(0-2) ft BGS*	*(3-5) ft BGS*
Sample Type																		
	Units																	
Volatile Organic Compounds (VOCs)																		
1,1,1-Trichloroethane	mg/kg	0.044 U	0.18	0.05 U	0.045 U	0.042 U	1.5	0.045 U	0.043 U	-	-	-	0.044 U	0.042 U	0.045 U	0.045 U	0.044 U	0.043 U
1,1,2,2-Tetrachloroethane	mg/kg	0.044 U	0.042 U	0.05 U	0.045 U	0.042 U	0.044 U	0.045 U	0.043 U	-	-	-	0.044 U	0.042 U	0.045 U	0.045 U	0.044 U	0.043 U
1,1,2-Trichloroethane	mg/kg	0.044 U	0.042 U	0.05 U	0.045 U	0.042 U	0.044 U	0.045 U	0.043 U	-	-	-	0.044 U	0.042 U	0.045 U	0.045 U	0.044 U	0.043 U
1,1-Dichloroethane	mg/kg	0.044 U	0.042 U	0.05 U	0.045 U	0.042 U	0.082	0.045 U	0.043 U	-	-	-	0.044 U	0.042 U	0.045 U	0.045 U	0.044 U	0.043 U
1,1-Dichloroethene	mg/kg	0.044 U	0.03 J	0.05 U	0.045 U	0.042 U	0.044 U	0.045 U	0.043 U	-	-	-	0.044 U	0.042 U	0.045 U	0.045 U	0.044 U	0.043 U
1,2,4-Trichlorobenzene	mg/kg	0.22 U	0.21 U	0.25 U	0.22 U	0.21 U	0.22 U	0.22 U	0.21 U	-	-	-	0.22 U	0.21 U	0.22 U	0.23 U	0.22 U	0.22 U
1,2-Dibromo-3-chloropropane (DBCP)	mg/kg	0.22 U	0.21 U	0.25 U	0.22 U	0.21 U	0.22 U	0.22 U	0.21 U	-	-	-	0.22 U	0.21 U	0.22 U	0.23 U	0.22 U	0.22 U
1,2-Dibromoethane (Ethylene dibromide)	mg/kg	0.22 U	0.21 U	0.25 U	0.22 U	0.21 U	0.22 U	0.22 U	0.21 U	-	-	-	0.22 U	0.21 U	0.22 U	0.23 U	0.22 U	0.22 U
1,2-Dichlorobenzene	mg/kg	0.089 U	0.084 U	0.099 U	0.089 U	0.083 U	0.088 U	0.089 U	0.086 U	-	-	-	0.087 U	0.084 U	0.089 U	0.09 U	0.088 U	0.087 U
1,2-Dichloroethane	mg/kg	0.044 U	0.042 U	0.05 U	0.045 U	0.042 U	0.044 U	0.045 U	0.043 U	-	-	-	0.044 U	0.042 U	0.045 U	0.045 U	0.044 U	0.043 U
1,2-Dichloropropane	mg/kg	0.044 U	0.042 U	0.05 U	0.045 U	0.042 U	0.044 U	0.045 U	0.043 U	-	-	-	0.044 U	0.042 U	0.045 U	0.045 U	0.044 U	0.043 U
1,3-Dichlorobenzene	mg/kg	0.089 U	0.084 U	0.099 U	0.089 U	0.083 U	0.088 U	0.089 U	0.086 U	-	-	-	0.087 U	0.084 U	0.089 U	0.09 U	0.088 U	0.087 U
1,4-Dichlorobenzene	mg/kg	0.089 U	0.084 U	0.099 U	0.089 U	0.083 U	0.088 U	0.089 U	0.086 U	-	-	-	0.087 U	0.084 U	0.089 U	0.09 U	0.088 U	0.087 U
2-Butanone (Methyl ethyl ketone) (MEK)	mg/kg	0.67 U	0.63 U	0.74 U	0.67 U	0.62 U	0.66 U	0.67 U	0.64 U	-	-	-	0.65 U	0.63 U	0.67 U	0.68 U	0.66 U	0.65 U
2-Hexanone	mg/kg	2.2 U	2.1 U	2.5 U	2.2 U	2.1 U	2.2 U	2.2 U	2.1 U	-	-	-	2.2 U	2.1 U	2.2 U	2.3 U	2.2 U	2.2 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	mg/kg	2.2 U	2.1 U	2.5 U	2.2 U	2.1 U	2.2 U	2.2 U	2.1 U	-	-	-	2.2 U	2.1 U	2.2 U	2.3 U	2.2 U	2.2 U
Acetone	mg/kg	0.67 U	0.63 U	0.74 U	0.67 U	0.62 U	0.66 U	0.67 U	0.64 U	-	-	-	0.65 U	0.63 U	0.67 U	0.68 U	0.66 U	0.65 U
Benzene	mg/kg	0.044 U	0.042 U	0.05 U	0.045 U	0.042 U	0.044 U	0.045 U	0.043 U	-	-	-	0.044 U	0.042 U	0.045 U	0.045 U	0.044 U	0.043 U
Bromodichloromethane	mg/kg	0.089 U	0.084 U	0.099 U	0.089 U	0.083 U	0.088 U	0.089 U	0.086 U	-	-	-	0.087 U	0.084 U	0.089 U	0.09 U	0.088 U	0.087 U
Bromoform	mg/kg	0.089 U	0.084 U	0.099 U	0.089 U	0.083 U	0.088 U	0.089 U	0.086 U	-	-	-	0.087 U	0.084 U	0.089 U	0.09 U	0.088 U	0.087 U
Bromomethane (Methyl bromide)	mg/kg	0.22 U	0.21 U	0.25 U	0.22 U	0.21 U	0.22 U	0.22 U	0.21 U	-	-	-	0.22 U	0.21 U	0.22 U	0.23 U	0.22 U	0.22 U
Carbon disulfide	mg/kg	0.22 U	0.21 U	0.25 U	0.22 U	0.21 U	0.22 U	0.22 U	0.21 U	-	-	-	0.22 U	0.21 U	0.22 U	0.23 U	0.22 U	0.013 J
Carbon tetrachloride	mg/kg	0.044 U	0.042 U	0.05 U	0.045 U	0.042 U	0.044 U	0.045 U	0.043 U	-	-	-	0.044 U	0.042 U	0.045 U	0.045 U	0.044 U	0.043 U
Chlorobenzene	mg/kg	0.044 U	0.042 U	0.05 U	0.045 U	0.042 U	0.044 U	0.045 U	0.043 U	-	-	-	0.044 U	0.042 U	0.045 U	0.045 U	0.044 U	0.043 U
Chloroethane	mg/kg	0.22 U	0.21 U	0.25 U	0.22 U	0.21 U	0.22 U	0.22 U	0.21 U	-	-	-	0.22 U	0.21 U	0.22 U	0.23 U	0.22 U	0.22 U
Chloroform (Trichloromethane)	mg/kg	0.044 U	0.042 U	0.05 U	0.045 U	0.042 U	0.044 U	0.045 U	0.043 U	-	-	-	0.044 U	0.042 U	0.045 U	0.045 U	0.044 U	0.043 U
Chloromethane (Methyl chloride)	mg/kg	0.22 U	0.21 U	0.25 U	0.22 U	0.21 U	0.22 U	0.22 U	0.21 U	-	-	-	0.22 U	0.21 U	0.22 U	0.23 U	0.22 U	0.22 U
cis-1,2-Dichloroethene	mg/kg	0.044 U	0.042 U	0.05 U	0.045 U	0.042 U	0.35	0.045 U	0.043 U	-	-	-	0.044 U	0.042 U	0.045 U	0.045 U	0.044 U	0.043 U
cis-1,3-Dichloropropene	mg/kg	0.044 U	0.042 U	0.05 U	0.045 U	0.042 U	0.044 U	0.045 U	0.043 U	-	-	-	0.044 U	0.042 U	0.045 U	0.045 U	0.044 U	0.043 U
Cyclohexane	mg/kg	1.1 U	1 U	1.2 U	1.1 U	1 U	1.1 U	1.1 U	1 U	-	-	-	1 U	1 U	1.1 U	1.1 U	1.1 U	1 U
Dibromochloromethane	mg/kg	0.044 U	0.042 U	0.05 U	0.045 U	0.042 U	0.044 U	0.045 U	0.043 U	-	-	-	0.044 U	0.042 U	0.045 U	0.045 U	0.044 U	0.043 U
Dichlorodifluoromethane (CFC-12)	mg/kg	0.089 U	0.084 U	0.099 U	0.089 U	0.083 U	0.088 U	0.089 U	0.086 U	-	-	-	0.087 U	0.084 U	0.089 U	0.09 U	0.088 U	0.087 U
Ethylbenzene	mg/kg	0.044 U	0.042 U	0.05 U	0.045 U	0.042 U	0.044 U	0.045 U	0.043 U	-	-	-	0.044 U	0.042 U	0.045 U	0.045 U	0.044 U	0.043 U
Isopropyl benzene	mg/kg	0.22 U	0.21 U	0.25 U	0.22 U	0.21 U	0.22 U	0.22 U	0.21 U	-	-	-	0.22 U	0.21 U	0.0074 J	0.23 U	0.22 U	0.22 U
Methyl acetate	mg/kg	1.1 U	1 U	1.2 U	1.1 U	1 U	0.043 J	1.1 U	1 U	-	-	-	1 U	0.037 J	0.053 J	1.1 U	0.089 J	0.17 J
Methyl cyclohexane	mg/kg	0.021 J	1 U	1.2 U	1.1 U	1 U	1.1 U	1.1 U	1 U	-	-	-	1 U	1 U	0.15 J	0.07 J	1.1 U	1 U
Methyl tert butyl ether (MTBE)	mg/kg	0.22 U	0.21 U	0.25 U	0.22 U	0.21 U	0.22 U	0.22 U	0.21 U	-	-	-	0.22 U	0.21 U	0.22 U	0.23 U	0.22 U	0.22 U
Methylene chloride	mg/kg	0.22 U	0.21 U	0.25 U	0.22 U	0.21 U	0.22 U	0.22 U	0.21 U	-	-	-	0.22 U	0.21 U	0.22 U	0.23 U	0.22 U	0.22 U
Styrene	mg/kg	0.044 U	0.042 U	0.05 U	0.045 U	0.042 U	0.044 U	0.045 U	0.043 U	-	-	-	0.044 U	0.042 U	0.045 U	0.045 U	0.044 U	0.043 U
Tetrachloroethene	mg/kg	**0.31**[bc]	**0.21**[bc]	0.05 U	0.045 U	0.042 U	0.044 U	0.045 U	0.043 U	-	-	-	0.032 J	0.1	0.093	**0.27**[bc]	0.044 U	0.043 U
Toluene	mg/kg	0.089 U	0.084 U	0.099 U	0.089 U	0.083 U	0.088 U	0.089 U	0.086 U	-	-	-	0.087 U	0.084 U	0.048 J	0.019 J	0.088 U	0.087 U
trans-1,2-Dichloroethene	mg/kg	0.044 U	0.042 U	0.05 U	0.045 U	0.042 U	0.028 J	0.045 U	0.043 U	-	-	-	0.044 U	0.042 U	0.045 U	0.045 U	0.044 U	0.043 U
trans-1,3-Dichloropropene	mg/kg	0.044 U	0.042 U	0.05 U	0.045 U	0.042 U	0.044 U	0.045 U	0.043 U	-	-	-	0.044 U	0.042 U	0.045 U	0.045 U	0.044 U	0.043 U
Trichloroethene	mg/kg	0.044 U	0.042 U	0.05 U	0.045 U	0.042 U	0.044 U	0.045 U	0.043 U	-	-	-	0.044 U	0.042 U	0.045 U	0.022 J	0.044 U	0.024 J

TABLE 3.8

PART 201 CRITERIA EXCEEDANCES - SOIL
2013 RFI REPORT
FORMER GENERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation		*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*
Perimeter Status (1)		*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*
Sample Location		*CRA-751M*	*CRA-751M*	*CRA-752M*	*CRA-752M*	*CRA-753M*	*CRA-753M*	*CRA-784I*	*CRA-784I*	*CRA-847SB*	*CRA-847SB*	*CRA-847SB*	*CRA-854SB*	*CRA-854SB*	*CRA-855SB*	*CRA-855SB*	*CRA-856SB*	*CRA-856SB*
Sample Identification (SO-17358-)		*032112-CB-225*	*032112-CB-226*	*032312-CB-245*	*032312-CB-246*	*032212-CB-238*	*032212-CB-239*	*031512-DR-072*	*031512-DR-073*	*032113-DR-022*	*032113-DR-023*	*032113-DR-024*	*032113-DR-003*	*032113-DR-004*	*032113-DR-005*	*032113-DR-006*	*032113-DR-007*	*032113-DR-009*
Sample Date		*3/21/2012*	*3/21/2012*	*3/23/2012*	*3/23/2012*	*3/22/2012*	*3/22/2012*	*3/15/2012*	*3/15/2012*	*3/21/2013*	*3/21/2013*	*3/21/2013*	*3/21/2013*	*3/21/2013*	*3/21/2013*	*3/21/2013*	*3/21/2013*	*3/21/2013*
Sample Depth		*(0.5-2.5) ft BGS*	*(6.5-8.5) ft BGS*	*(1.5-3.5) ft BGS*	*(7-9) ft BGS*	*(0.5-2.5) ft BGS*	*(7.5-9.5) ft BGS*	*(0-2) ft BGS*	*(2-4) ft BGS*	*(0-2) ft BGS*	*(2-4) ft BGS*	*(4-5) ft BGS*	*(0-2) ft BGS*	*(3-5) ft BGS*	*(1-3) ft BGS*	*(4-6) ft BGS*	*(0-2) ft BGS*	*(3-5) ft BGS*
Sample Type																		
	Units																	
VOCs Continued																		
Trichlorofluoromethane (CFC-11)	mg/kg	0.089 U	0.084 U	0.099 U	0.089 U	0.083 U	0.088 U	0.089 U	0.086 U	-	-	-	0.087 U	0.084 U	0.089 U	0.09 U	0.088 U	0.087 U
Trifluorotrichloroethane (Freon 113)	mg/kg	0.22 U	0.21 U	0.25 U	0.22 U	0.21 U	0.068 J	0.22 U	0.21 U	-	-	-	0.22 U	0.21 U	0.22 U	0.23 U	0.22 U	0.22 U
Vinyl chloride	mg/kg	0.036 U	0.034 U	0.04 U	0.036 U	0.033 U	0.035 U	0.036 U	0.034 U	-	-	-	0.035 U	0.034 U	0.036 U	0.036 U	0.035 U	0.035 U
Xylenes (total)	mg/kg	0.13 U	0.13 U	0.15 U	0.13 U	0.12 U	0.13 U	0.13 U	0.13 U	-	-	-	0.13 U	0.13 U	0.13	0.14 U	0.13 U	0.13 U
Semi-Volatile Organic Compounds (SVOCs)																		
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	mg/kg	0.29 U	0.28 U	0.35 U	0.28 U	5.6 U	0.3 U	0.29 U	0.28 U	-	-	-	-	-	-	-	-	0.31 U
2,4,5-Trichlorophenol	mg/kg	0.29 U	0.28 U	0.35 U	0.28 U	5.6 U	0.3 U	0.29 U	0.28 U	-	-	-	-	-	-	-	-	0.31 U
2,4,6-Trichlorophenol	mg/kg	0.29 U	0.28 U	0.35 U	0.28 U	5.6 U	0.3 U	0.29 U	0.28 U	-	-	-	-	-	-	-	-	0.31 U
2,4-Dichlorophenol	mg/kg	0.29 U	0.28 U	0.35 U	0.28 U	5.6 U	0.3 U	0.29 U	0.28 U	-	-	-	-	-	-	-	-	0.31 U
2,4-Dimethylphenol	mg/kg	0.29 U	0.28 U	0.35 U	0.28 U	5.6 U	0.3 U	0.29 U	0.28 U	-	-	-	-	-	-	-	-	0.31 U
2,4-Dinitrophenol	mg/kg	0.17 U	0.16 U	0.2 U	0.16 U	3.2 U	0.17 U	R	0.16 U	-	-	-	-	-	-	-	-	0.18 U
2,4-Dinitrotoluene	mg/kg	0.29 U	0.28 U	0.35 U	0.28 U	5.6 U	0.3 U	0.29 U	0.28 U	-	-	-	-	-	-	-	-	0.31 U
2,6-Dinitrotoluene	mg/kg	0.29 U	0.28 U	0.35 U	0.28 U	5.6 U	0.3 U	0.29 U	0.28 U	-	-	-	-	-	-	-	-	0.31 U
2-Chloronaphthalene	mg/kg	0.29 U	0.28 U	0.35 U	0.28 U	5.6 U	0.3 U	0.29 U	0.28 U	-	-	-	-	-	-	-	-	0.31 U
2-Chlorophenol	mg/kg	0.29 U	0.28 U	0.35 U	0.28 U	5.6 U	0.3 U	0.29 U	0.28 U	-	-	-	-	-	-	-	-	0.31 U
2-Methylnaphthalene	mg/kg	0.079 J	0.28 U	0.0071 J	0.28 U	5.6 U	0.0042 J	0.29 U	0.28 U	-	-	-	-	-	-	-	-	0.31 U
2-Methylphenol	mg/kg	0.29 U	0.28 U	0.35 U	0.28 U	5.6 U	0.3 U	0.29 U	0.28 U	-	-	-	-	-	-	-	-	0.31 U
2-Nitroaniline	mg/kg	0.22 U	0.21 U	0.26 U	0.21 U	4.2 U	0.22 U	0.22 U	0.21 U	-	-	-	-	-	-	-	-	0.23 U
2-Nitrophenol	mg/kg	0.29 U	0.28 U	0.35 U	0.28 U	5.6 U	0.3 U	0.29 U	0.28 U	-	-	-	-	-	-	-	-	0.31 U
3&4-Methylphenol	mg/kg	0.29 U	0.28 U	0.35 U	0.28 U	5.6 U	0.3 U	0.29 U	0.28 U	-	-	-	-	-	-	-	-	0.31 U
3,3'-Dichlorobenzidine	mg/kg	1.8 U	1.7 U	2.1 U	1.7 U	34 U	1.8 U	1.7 U	1.7 U	-	-	-	-	-	-	-	-	1.9 U
3-Nitroaniline	mg/kg	0.22 U	0.21 U	0.26 U	0.21 U	4.2 U	0.22 U	0.22 U	0.21 U	-	-	-	-	-	-	-	-	0.23 U
4,6-Dinitro-2-methylphenol	mg/kg	0.17 U	0.16 U	0.2 U	0.16 U	3.2 U	0.17 U	R	0.16 U	-	-	-	-	-	-	-	-	0.18 U
4-Bromophenyl phenyl ether	mg/kg	0.29 U	0.28 U	0.35 U	0.28 U	5.6 U	0.3 U	0.29 U	0.28 U	-	-	-	-	-	-	-	-	0.31 U
4-Chloro-3-methylphenol	mg/kg	0.29 U	0.28 U	0.35 U	0.28 U	5.6 U	0.3 U	0.29 U	0.28 U	-	-	-	-	-	-	-	-	0.31 U
4-Chloroaniline	mg/kg	0.22 U	0.21 U	0.26 U	0.21 U	4.2 U	0.22 U	0.22 U	0.21 U	-	-	-	-	-	-	-	-	0.23 U
4-Chlorophenyl phenyl ether	mg/kg	0.29 U	0.28 U	0.35 U	0.28 U	5.6 U	0.3 U	0.29 U	0.28 U	-	-	-	-	-	-	-	-	0.31 U
4-Nitroaniline	mg/kg	0.22 U	0.21 U	0.26 U	0.21 U	4.2 U	0.22 U	0.22 U	0.21 U	-	-	-	-	-	-	-	-	0.23 U
4-Nitrophenol	mg/kg	0.36 U	0.35 U	0.43 U	0.35 U	7 U	0.37 U	0.36 U	0.35 U	-	-	-	-	-	-	-	-	0.39 U
Acenaphthene	mg/kg	0.29 U	0.28 U	0.35 U	0.28 U	5.6 U	0.3 U	0.29 U	0.28 U	-	-	-	-	-	-	-	-	0.31 U
Acenaphthylene	mg/kg	0.29 U	0.28 U	0.35 U	0.28 U	5.6 U	0.3 U	0.29 U	0.28 U	-	-	-	-	-	-	-	-	0.31 U
Acetophenone	mg/kg	0.29 U	0.28 U	0.35 U	0.28 U	5.6 U	0.3 U	0.29 U	0.28 U	-	-	-	-	-	-	-	-	0.31 U
Anthracene	mg/kg	0.29 U	0.28 U	0.35 U	0.28 U	5.6 U	0.3 U	0.29 U	0.28 U	-	-	-	-	-	-	-	-	0.31 U
Atrazine	mg/kg	0.044 U	0.042 U	0.053 U	0.043 U	0.85 U	0.045 U	0.044 U	0.043 U	-	-	-	-	-	-	-	-	0.047 U
Benzaldehyde	mg/kg	0.29 U	0.28 U	0.35 U	0.28 U	5.6 U	0.3 U	0.29 U	0.28 U	-	-	-	-	-	-	-	-	0.31 U
Benzo(a)anthracene	mg/kg	0.0065 J	0.28 U	0.35 U	0.28 U	5.6 U	0.3 U	0.29 U	0.28 U	-	-	-	-	-	-	-	-	0.31 U
Benzo(a)pyrene	mg/kg	0.29 U	0.28 U	0.35 U	0.28 U	0.092 J	0.3 U	0.29 U	0.28 U	-	-	-	-	-	-	-	-	0.31 U
Benzo(b)fluoranthene	mg/kg	0.29 U	0.28 U	0.35 U	0.28 U	0.23 J	0.3 U	0.29 U	0.28 U	-	-	-	-	-	-	-	-	0.011 J
Benzo(g,h,i)perylene	mg/kg	0.008 J	0.28 U	0.0062 J	0.28 U	0.13 J	0.3 U	0.29 U	0.28 U	-	-	-	-	-	-	-	-	0.31 U
Benzo(k)fluoranthene	mg/kg	0.29 U	0.28 U	0.35 U	0.28 U	0.09 J	0.3 U	0.29 U	0.28 U	-	-	-	-	-	-	-	-	0.31 U
Biphenyl (1,1-Biphenyl)	mg/kg	0.29 U	0.28 U	0.35 U	0.28 U	5.6 U	0.3 U	0.29 U	0.28 U	-	-	-	-	-	-	-	-	0.31 U
bis(2-Chloroethoxy)methane	mg/kg	0.29 U	0.28 U	0.35 U	0.28 U	5.6 U	0.3 U	0.29 U	0.28 U	-	-	-	-	-	-	-	-	0.31 U
bis(2-Chloroethyl)ether	mg/kg	0.088 U	0.084 U	0.11 U	0.086 U	1.7 U	0.09 U	0.087 U	0.086 U	-	-	-	-	-	-	-	-	0.093 U
bis(2-Ethylhexyl)phthalate (DEHP)	mg/kg	0.29 U	0.28 U	0.35 U	0.046 J	5.6 U	0.3 U	0.11 J	0.28 U	-	-	-	-	-	-	-	-	0.31 U

TABLE 3.8

PART 201 CRITERIA EXCEEDANCES - SOIL
2013 RFI REPORT
FORMER GENERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation		*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*
Perimeter Status (1)		*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*
Sample Location		*CRA-751M*	*CRA-751M*	*CRA-752M*	*CRA-752M*	*CRA-753M*	*CRA-753M*	*CRA-784I*	*CRA-784I*	*CRA-847SB*	*CRA-847SB*	*CRA-847SB*	*CRA-854SB*	*CRA-854SB*	*CRA-855SB*	*CRA-855SB*	*CRA-856SB*	*CRA-856SB*
Sample Identification (SO-17358-)		*032112-CB-225*	*032112-CB-226*	*032312-CB-245*	*032312-CB-246*	*032212-CB-238*	*032212-CB-239*	*031512-DR-072*	*031512-DR-073*	*032113-DR-022*	*032113-DR-023*	*032113-DR-024*	*032113-DR-003*	*032113-DR-004*	*032113-DR-005*	*032113-DR-006*	*032113-DR-007*	*032113-DR-009*
Sample Date		*3/21/2012*	*3/21/2012*	*3/23/2012*	*3/23/2012*	*3/22/2012*	*3/22/2012*	*3/15/2012*	*3/15/2012*	*3/21/2013*	*3/21/2013*	*3/21/2013*	*3/21/2013*	*3/21/2013*	*3/21/2013*	*3/21/2013*	*3/21/2013*	*3/21/2013*
Sample Depth		*(0.5-2.5) ft BGS*	*(6.5-8.5) ft BGS*	*(1.5-3.5) ft BGS*	*(7-9) ft BGS*	*(0.5-2.5) ft BGS*	*(7.5-9.5) ft BGS*	*(0-2) ft BGS*	*(2-4) ft BGS*	*(0-2) ft BGS*	*(2-4) ft BGS*	*(4-5) ft BGS*	*(0-2) ft BGS*	*(3-5) ft BGS*	*(1-3) ft BGS*	*(4-6) ft BGS*	*(0-2) ft BGS*	*(3-5) ft BGS*
Sample Type																		
	Units																	
SVOCs Continued																		
Butyl benzylphthalate (BBP)	mg/kg	0.29 U	0.28 U	0.35 U	0.28 U	5.6 U	0.3 U	0.29 U	0.28 U	-	-	-	-	-	-	-	-	0.31 U
Caprolactam	mg/kg	0.29 U	0.28 U	0.35 U	0.28 U	5.6 U	0.3 U	0.29 U	0.28 U	-	-	-	-	-	-	-	-	0.31 U
Carbazole	mg/kg	0.29 U	0.28 U	0.35 U	0.28 U	5.6 U	0.3 U	0.29 U	0.28 U	-	-	-	-	-	-	-	-	0.31 U
Chrysene	mg/kg	0.012 J	0.28 U	0.35 U	0.28 U	5.6 U	0.0073 J	0.29 U	0.28 U	-	-	-	-	-	-	-	-	0.31 U
Dibenz(a,h)anthracene	mg/kg	0.29 U	0.28 U	0.35 U	0.28 U	5.6 U	0.3 U	0.29 U	0.28 U	-	-	-	-	-	-	-	-	0.31 U
Dibenzofuran	mg/kg	0.016 J	0.28 U	0.35 U	0.28 U	5.6 U	0.3 U	0.29 U	0.28 U	-	-	-	-	-	-	-	-	0.0061 J
Diethyl phthalate	mg/kg	0.29 U	0.28 U	0.35 U	0.28 U	5.6 U	0.3 U	0.29 U	0.28 U	-	-	-	-	-	-	-	-	0.31 U
Dimethyl phthalate	mg/kg	0.29 U	0.28 U	0.35 U	0.28 U	5.6 U	0.3 U	0.29 U	0.28 U	-	-	-	-	-	-	-	-	0.31 U
Di-n-butylphthalate (DBP)	mg/kg	0.29 U	0.28 U	0.35 U	0.28 U	5.6 U	0.3 U	0.29 U	0.28 U	-	-	-	-	-	-	-	-	0.31 U
Di-n-octyl phthalate (DnOP)	mg/kg	0.29 U	0.28 U	0.35 U	0.28 U	5.6 U	0.3 U	0.29 U	0.28 U	-	-	-	-	-	-	-	-	0.31 U
Fluoranthene	mg/kg	0.0078 J	0.28 U	0.0053 J	0.28 U	0.38 J	0.3 U	0.29 U	0.28 U	-	-	-	-	-	-	-	-	0.012 J
Fluorene	mg/kg	0.29 U	0.28 U	0.35 U	0.28 U	5.6 U	0.3 U	0.29 U	0.28 U	-	-	-	-	-	-	-	-	0.31 U
Hexachlorobenzene	mg/kg	0.29 U	0.28 U	0.35 U	0.28 U	5.6 U	0.3 U	0.29 U	0.28 U	-	-	-	-	-	-	-	-	0.31 U
Hexachlorobutadiene	mg/kg	0.044 U	0.042 U	0.053 U	0.043 U	0.85 U	0.045 U	0.044 U	0.043 U	-	-	-	-	-	-	-	-	0.047 U
Hexachlorocyclopentadiene	mg/kg	0.29 U	0.28 U	0.35 U	0.28 U	5.6 U	0.3 U	R	0.28 U	-	-	-	-	-	-	-	-	0.31 U
Hexachloroethane	mg/kg	0.29 U	0.28 U	0.35 U	0.28 U	5.6 U	0.3 U	0.29 U	0.28 U	-	-	-	-	-	-	-	-	0.31 U
Indeno(1,2,3-cd)pyrene	mg/kg	0.29 U	0.28 U	0.35 U	0.28 U	5.6 U	0.3 U	0.29 U	0.28 U	-	-	-	-	-	-	-	-	0.31 U
Isophorone	mg/kg	0.29 U	0.28 U	0.35 U	0.28 U	5.6 U	0.3 U	0.29 U	0.28 U	-	-	-	-	-	-	-	-	0.31 U
Naphthalene	mg/kg	0.052 J	0.28 U	0.35 U	0.28 U	5.6 U	0.3 U	0.29 U	0.28 U	-	-	-	-	-	-	-	-	0.31 U
Nitrobenzene	mg/kg	0.29 U	0.28 U	0.35 U	0.28 U	5.6 U	0.3 U	0.29 U	0.28 U	-	-	-	-	-	-	-	-	0.31 U
N-Nitrosodi-n-propylamine	mg/kg	0.29 U	0.28 U	0.35 U	0.28 U	5.6 U	0.3 U	0.29 U	0.28 U	-	-	-	-	-	-	-	-	0.31 U
N-Nitrosodiphenylamine	mg/kg	0.29 U	0.28 U	0.35 U	0.28 U	5.6 U	0.3 U	0.29 U	0.28 U	-	-	-	-	-	-	-	-	0.31 U
Pentachlorophenol	mg/kg	0.17 U	0.16 U	0.2 U	0.16 U	3.2 U	0.17 U	0.16 U	0.16 U	-	-	-	-	-	-	-	-	0.18 U
Phenanthrene	mg/kg	0.031 J	0.28 U	0.011 J	0.28 U	5.6 U	0.3 U	0.29 U	0.28 U	-	-	-	-	-	-	-	-	0.0087 J
Phenol	mg/kg	0.29 U	0.28 U	0.35 U	0.28 U	5.6 U	0.3 U	0.29 U	0.28 U	-	-	-	-	-	-	-	-	0.31 U
Pyrene	mg/kg	0.01 J	0.0059 J	0.0067 J	0.28 U	0.5 J	0.3 U	0.29 U	0.28 U	-	-	-	-	-	-	-	-	0.011 J
Metals																		
Aluminum	mg/kg	1500	1700	2700	2200	2200	1600	4400	2000	-	-	-	-	-	-	-	-	**8000[bc]**
Antimony	mg/kg	0.044 J	0.058 J	0.11 J	0.055 J	0.12 J	0.046 J	0.03 J	0.035 J	-	-	-	-	-	-	-	-	0.023 J
Arsenic	mg/kg	3.8	3	**250[bcdpq]**	1.9	2.9	2	2.4	3.1	2.5 J	2.2 J	2.7 J	-	-	-	-	-	2 J
Barium	mg/kg	9	9.5	27	9.3	8.7	5.8	14	9.5	-	-	-	-	-	-	-	-	41
Beryllium	mg/kg	0.17 U	0.071 J	0.22	0.1 J	0.11 J	0.074 J	0.17 U	0.14 U	-	-	-	-	-	-	-	-	0.44
Cadmium	mg/kg	0.14	0.066 J	0.5 U	0.092	0.08	0.15	0.085 U	0.068 J	-	-	-	-	-	-	-	-	0.13
Calcium	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chromium	mg/kg	4.4	3.9	9.8	4.8	6	4.6	9.6	5.7	-	-	-	-	-	-	-	-	12
Chromium III (trivalent)	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chromium VI (hexavalent)	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cobalt	mg/kg	2.4	2	6.8	2.3	2.7	3.4	2.5	2.9	-	-	-	-	-	-	-	-	4
Copper	mg/kg	5.6	4.9	63	7.3	7	4.5	2.8	6.2	-	-	-	-	-	-	-	-	12
Iron	mg/kg	4500	5400	**97000[bc]**	5200	5900	3400	6900	5800	-	-	-	-	-	-	-	-	12000
Lead	mg/kg	3.5	3.3	6.6	2.8	4	2.1	3.7	2.9	-	-	-	-	-	-	-	-	5.6
Lead - coarse fraction	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lead - fine fraction	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lead - total (calculated by fine/coarse fraction)	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Magnesium	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

TABLE 3.8

PART 201 CRITERIA EXCEEDANCES - SOIL
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FORMER GENERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation		*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*
Perimeter Status (1)		*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*
Sample Location		*CRA-751M*	*CRA-751M*	*CRA-752M*	*CRA-752M*	*CRA-753M*	*CRA-753M*	*CRA-784I*	*CRA-784I*	*CRA-847SB*	*CRA-847SB*	*CRA-847SB*	*CRA-854SB*	*CRA-854SB*	*CRA-855SB*	*CRA-855SB*	*CRA-856SB*	*CRA-856SB*
Sample Identification (SO-17358-)		*032112-CB-225*	*032112-CB-226*	*032312-CB-245*	*032312-CB-246*	*032212-CB-238*	*032212-CB-239*	*031512-DR-072*	*031512-DR-073*	*032113-DR-022*	*032113-DR-023*	*032113-DR-024*	*032113-DR-003*	*032113-DR-004*	*032113-DR-005*	*032113-DR-006*	*032113-DR-007*	*032113-DR-009*
Sample Date		*3/21/2012*	*3/21/2012*	*3/23/2012*	*3/23/2012*	*3/22/2012*	*3/22/2012*	*3/15/2012*	*3/15/2012*	*3/21/2013*	*3/21/2013*	*3/21/2013*	*3/21/2013*	*3/21/2013*	*3/21/2013*	*3/21/2013*	*3/21/2013*	*3/21/2013*
Sample Depth		*(0.5-2.5) ft BGS*	*(6.5-8.5) ft BGS*	*(1.5-3.5) ft BGS*	*(7-9) ft BGS*	*(0.5-2.5) ft BGS*	*(7.5-9.5) ft BGS*	*(0-2) ft BGS*	*(2-4) ft BGS*	*(0-2) ft BGS*	*(2-4) ft BGS*	*(4-5) ft BGS*	*(0-2) ft BGS*	*(3-5) ft BGS*	*(1-3) ft BGS*	*(4-6) ft BGS*	*(0-2) ft BGS*	*(3-5) ft BGS*
Sample Type																		
	Units																	
Metals Continued																		
Manganese	mg/kg	160 J	140 J	80	180	170	100	54	330	-	-	-	-	-	-	-	-	82
Mercury	mg/kg	0.039 UJ	0.037 UJ	0.027 J	0.039 U	0.046 U	0.047 U	0.047 U	0.032 J	-	-	-	-	-	-	-	-	0.047 U
Nickel	mg/kg	6.9	6.2	19	6.4	6.3	9.9	6.7	8	-	-	-	-	-	-	-	-	13
Potassium	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Selenium	mg/kg	0.25	0.17	**13**[bcd]	0.28	0.24	**0.75**[d]	0.18 J	0.21 J	-	-	-	-	-	-	-	-	0.26
Silver	mg/kg	0.083 U	0.072 U	0.023 J	0.072 U	0.075 U	0.083 U	0.085 U	0.072 U	-	-	-	-	-	-	-	-	0.024 J
Sodium	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Thallium	mg/kg	0.093 U	0.072 U	0.27	0.083	0.075 U	0.083 U	0.15	0.11	-	-	-	-	-	-	-	-	0.1
Vanadium	mg/kg	5.2	5.2	21	7.7	8.2	5.7	12	8	-	-	-	-	-	-	-	-	25
Zinc	mg/kg	18	14	51	15	17	14	13	14	-	-	-	-	-	-	-	-	19 J
Polychlorinated biphenyls (PCBs)																		
Aroclor-1016 (PCB-1016)	mg/kg	0.037 U	0.035 U	0.044 U	0.036 U	0.035 U	0.037 U	0.036 U	0.035 U	-	-	-	-	-	-	-	-	0.037 U
Aroclor-1221 (PCB-1221)	mg/kg	0.037 U	0.035 U	0.044 U	0.036 U	0.035 U	0.037 U	0.036 U	0.035 U	-	-	-	-	-	-	-	-	0.037 U
Aroclor-1232 (PCB-1232)	mg/kg	0.037 U	0.035 U	0.044 U	0.036 U	0.035 U	0.037 U	0.036 U	0.035 U	-	-	-	-	-	-	-	-	0.037 U
Aroclor-1242 (PCB-1242)	mg/kg	0.037 U	0.035 U	0.044 U	0.036 U	0.035 U	0.037 U	0.036 U	0.035 U	-	-	-	-	-	-	-	-	0.037 U
Aroclor-1248 (PCB-1248)	mg/kg	0.037 U	0.035 U	0.044 U	0.036 U	0.035 U	0.037 U	0.036 U	0.035 U	-	-	-	-	-	-	-	-	0.037 U
Aroclor-1254 (PCB-1254)	mg/kg	0.037 U	0.035 U	0.044 U	0.036 U	0.035 U	0.037 U	0.036 U	0.035 U	-	-	-	-	-	-	-	-	0.037 U
Aroclor-1260 (PCB-1260)	mg/kg	0.037 U	0.035 U	0.044 U	0.036 U	0.035 U	0.037 U	0.036 U	0.035 U	-	-	-	-	-	-	-	-	0.037 U
Aroclor-1262 (PCB-1262)	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.037 U
Aroclor-1268 (PCB-1268)	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.037 U
Total PCBs	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-

Notes

Michigan Part 201 generic clean up criteria (updated September 28, 2012)

ID - Insufficient data to develop criterion

NLV - Hazardous substance is not likely to volatilize under most conditions

NA - Criterion or value is not available

Perimeter Status (1) - N - non-perimeter, Y - perimeter

mg/kg - milligram/kilogram

Notes:

U - Not detected at the associated reporting limit.

J - Estimated concentration.

UJ - Not detected; associated reporting limit is estimated.

R - Rejected

TABLE 3.8

PART 201 CRITERIA EXCEEDANCES - SOIL
2013 RFI REPORT
FORMER GENERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation		*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*EAST01*	*EAST01*	*EAST01*	*EAST01*	*EAST01*	*EAST01*	*EAST01*	*EAST01*	*EAST01*	*EAST01*	*EAST01*	*EAST01*	*EAST01*	*EAST01*
Perimeter Status (1)		*Y*	*Y*	*Y*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*
Sample Location		*CRA-856SB*	*CRA-857SB*	*CRA-857SB*	*CRA-767SB*	*CRA-767SB*	*CRA-769SB*	*CRA-769SB*	*CRA-770SB*	*CRA-770SB*	*CRA-771SB*	*CRA-771SB*	*CRA-773SB*	*CRA-773SB*	*CRA-774SB*	*CRA-775M*	*CRA-775M*	*CRA-775M*
Sample Identification (SO-17358-)		*032113-DR-008*	*032113-DR-001*	*032113-DR-002*	*030712-CB-149*	*030712-CB-150*	*030612-CB-130*	*030612-CB-131*	*032612-CB-253*	*032612-CB-254*	*030712-CB-145*	*030712-CB-146*	*030812-CB-175*	*030812-CB-176*	*032612-CB-252*	*032612-CB-249*	*032612-CB-250*	*032612-CB-251*
Sample Date		*3/21/2013*	*3/21/2013*	*3/21/2013*	*3/7/2012*	*3/7/2012*	*3/6/2012*	*3/6/2012*	*3/26/2012*	*3/26/2012*	*3/7/2012*	*3/7/2012*	*3/8/2012*	*3/8/2012*	*3/26/2012*	*3/26/2012*	*3/26/2012*	*3/26/2012*
Sample Depth		*(5-7) ft BGS*	*(0-2) ft BGS*	*(5-7) ft BGS*	*(1-3) ft BGS*	*(3-5) ft BGS*	*(1-3) ft BGS*	*(4-6) ft BGS*	*(1-3) ft BGS*	*(3-5) ft BGS*	*(1-3) ft BGS*	*(3-5) ft BGS*	*(1-3) ft BGS*	*(6-8) ft BGS*	*(1.5-3.25) ft BGS*	*(0.5-2.5) ft BGS*	*(2.5-4.5) ft BGS*	*(4.5-6) ft BGS*
Sample Type																		
	Units																	
Volatile Organic Compounds (VOCs)																		
1,1,1-Trichloroethane	mg/kg	1.5 U	0.044 U	0.5	0.044 U	0.043 U	0.046 U	0.044 U	0.041 U	0.043 U	0.038 U	0.041 U	0.04 U	0.041 U	0.044 U	0.047 U	0.045 U	0.044 U
1,1,2,2-Tetrachloroethane	mg/kg	1.5 U	0.044 U	0.041 U	0.044 U	0.043 U	0.046 U	0.044 U	0.041 U	0.043 U	0.038 U	0.041 U	0.04 U	0.041 U	0.044 U	0.047 U	0.045 U	0.044 U
1,1,2-Trichloroethane	mg/kg	1.5 U	0.044 U	0.041 U	0.044 U	0.043 U	0.046 U	0.044 U	0.041 U	0.043 U	0.038 U	0.041 U	0.04 U	0.041 U	0.044 U	0.047 U	0.045 U	0.044 U
1,1-Dichloroethane	mg/kg	1.5 U	0.037 J	0.041 U	0.044 U	0.043 U	0.046 U	0.044 U	0.041 U	0.043 U	0.038 U	0.041 U	0.04 U	0.041 U	0.044 U	0.047 U	0.045 U	0.044 U
1,1-Dichloroethene	mg/kg	1.5 U	0.044 U	**0.12**[f]	0.044 U	0.043 U	0.046 U	0.044 U	0.041 U	0.043 U	0.038 U	0.041 U	0.04 U	0.041 U	0.044 U	0.047 U	0.045 U	0.044 U
1,2,4-Trichlorobenzene	mg/kg	7.7 U	0.22 U	0.2 U	0.22 U	0.21 U	0.23 U	0.22 U	0.21 U	0.21 U	0.19 U	0.21 U	0.2 U	0.21 U	0.22 U	0.23 U	0.035 J	0.22 U
1,2-Dibromo-3-chloropropane (DBCP)	mg/kg	7.7 U	0.22 U	0.2 U	0.22 U	0.21 U	0.23 U	0.22 U	0.21 U	0.21 U	0.19 U	0.21 U	0.2 U	0.21 U	0.22 U	0.23 U	0.23 U	0.22 U
1,2-Dibromoethane (Ethylene dibromide)	mg/kg	7.7 U	0.22 U	0.2 U	0.22 U	0.21 U	0.23 U	0.22 U	0.21 U	0.21 U	0.19 U	0.21 U	0.2 U	0.21 U	0.22 U	0.23 U	0.23 U	0.22 U
1,2-Dichlorobenzene	mg/kg	3.1 U	0.087 U	0.081 U	0.089 U	0.086 U	0.091 U	0.087 U	0.083 U	0.085 U	0.076 U	0.083 U	0.08 U	0.082 U	0.088 U	0.093 U	0.09 U	0.088 U
1,2-Dichloroethane	mg/kg	1.5 U	0.044 U	0.041 U	0.044 U	0.043 U	0.046 U	0.044 U	0.041 U	0.043 U	0.038 U	0.041 U	0.04 U	0.041 U	0.044 U	0.047 U	0.045 U	0.044 U
1,2-Dichloropropane	mg/kg	1.5 U	0.044 U	0.041 U	0.044 U	0.043 U	0.046 U	0.044 U	0.041 U	0.043 U	0.038 U	0.041 U	0.04 U	0.041 U	0.044 U	0.047 U	0.045 U	0.044 U
1,3-Dichlorobenzene	mg/kg	3.1 U	0.087 U	0.081 U	0.089 U	0.086 U	0.091 U	0.087 U	0.083 U	0.085 U	0.076 U	0.083 U	0.08 U	0.082 U	0.088 U	0.093 U	0.09 U	0.088 U
1,4-Dichlorobenzene	mg/kg	3.1 U	0.087 U	0.081 U	0.089 U	0.086 U	0.091 U	0.087 U	0.083 U	0.085 U	0.076 U	0.083 U	0.08 U	0.082 U	0.088 U	0.093 U	0.09 U	0.088 U
2-Butanone (Methyl ethyl ketone) (MEK)	mg/kg	23 U	0.65 U	0.61 U	0.67 U	0.64 U	0.68 U	0.65 U	0.62 U	0.64 U	0.57 U	0.62 U	0.6 U	0.62 U	0.66 U	0.7 U	0.68 U	0.66 U
2-Hexanone	mg/kg	77 U	2.2 U	2 U	2.2 U	2.1 U	2.3 U	2.2 U	2.1 U	2.1 U	1.9 U	2.1 U	2 U	2.1 U	2.2 U	2.3 U	2.3 U	2.2 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	mg/kg	77 U	2.2 U	2 U	2.2 U	2.1 U	2.3 U	2.2 U	2.1 U	2.1 U	1.9 U	2.1 U	2 U	2.1 U	2.2 U	2.3 U	2.3 U	2.2 U
Acetone	mg/kg	23 U	0.65 U	0.61 U	0.67 U	0.64 U	0.68 U	0.65 U	0.62 U	0.64 U	0.57 U	0.62 U	0.6 U	0.62 U	0.66 U	0.7 U	0.68 U	0.66 U
Benzene	mg/kg	1.5 U	0.044 U	0.041 U	0.044 U	0.043 U	0.046 U	0.044 U	0.041 U	0.043 U	0.038 U	0.041 U	0.04 U	0.041 U	0.044 U	0.047 U	0.045 U	0.044 U
Bromodichloromethane	mg/kg	3.1 U	0.087 U	0.081 U	0.089 U	0.086 U	0.091 U	0.087 U	0.083 U	0.085 U	0.076 U	0.083 U	0.08 U	0.082 U	0.088 U	0.093 U	0.09 U	0.088 U
Bromoform	mg/kg	3.1 U	0.087 U	0.081 U	0.089 U	0.086 U	0.091 U	0.087 U	0.083 U	0.085 U	0.076 U	0.083 U	0.08 U	0.082 U	0.088 U	0.093 U	0.09 U	0.088 U
Bromomethane (Methyl bromide)	mg/kg	7.7 U	0.22 U	0.2 U	0.22 U	0.21 U	0.23 U	0.22 U	0.21 U	0.21 U	0.19 U	0.21 U	0.2 U	0.21 U	0.22 U	0.23 U	0.23 U	0.22 U
Carbon disulfide	mg/kg	7.7 U	0.22 U	0.2 U	0.22 U	0.21 U	0.23 U	0.22 U	0.21 U	0.21 U	0.19 U	0.21 U	0.2 U	0.21 U	0.22 U	0.23 U	0.23 U	0.22 U
Carbon tetrachloride	mg/kg	1.5 U	0.044 U	0.041 U	0.044 U	0.043 U	0.046 U	0.044 U	0.041 U	0.043 U	0.038 U	0.041 U	0.04 U	0.041 U	0.044 U	0.047 U	0.045 U	0.044 U
Chlorobenzene	mg/kg	1.5 U	0.044 U	0.041 U	0.044 U	0.043 U	0.046 U	0.044 U	0.041 U	0.042 J	0.025 J	0.18	0.04 U	0.041 U	0.044 U	0.047 U	0.045 U	0.044 U
Chloroethane	mg/kg	7.7 U	0.22 U	0.2 U	0.22 U	0.21 U	0.23 U	0.22 U	0.21 U	0.21 U	0.19 U	0.21 U	0.2 U	0.21 U	0.22 U	0.23 U	0.23 U	0.22 U
Chloroform (Trichloromethane)	mg/kg	1.5 U	0.044 U	0.041 U	0.044 U	0.043 U	0.046 U	0.044 U	0.041 U	0.043 U	0.038 U	0.041 U	0.04 U	0.041 U	0.044 U	0.047 U	0.045 U	0.044 U
Chloromethane (Methyl chloride)	mg/kg	7.7 U	0.22 U	0.2 U	0.22 U	0.21 U	0.23 U	0.22 U	0.21 U	0.21 U	0.19 U	0.21 U	0.2 U	0.21 U	0.22 U	0.23 U	0.23 U	0.22 U
cis-1,2-Dichloroethene	mg/kg	1.5 U	0.044 U	0.041 U	0.044 U	0.043 U	0.046 U	0.044 U	0.041 U	0.043 U	0.038 U	0.041 U	0.04 U	0.041 U	0.044 U	0.047 U	0.045 U	0.044 U
cis-1,3-Dichloropropene	mg/kg	1.5 U	0.044 U	0.041 U	0.044 U	0.043 U	0.046 U	0.044 U	0.041 U	0.043 U	0.038 U	0.041 U	0.04 U	0.041 U	0.044 U	0.047 U	0.045 U	0.044 U
Cyclohexane	mg/kg	37 U	1 U	0.97 U	1.1 U	1 U	1.1 U	1 U	1 U	1 U	0.92 U	0.99 U	0.96 U	0.99 U	1.1 U	1.1 U	1.1 U	1.1 U
Dibromochloromethane	mg/kg	1.5 U	0.044 U	0.041 U	0.044 U	0.043 U	0.046 U	0.044 U	0.041 U	0.043 U	0.038 U	0.041 U	0.04 U	0.041 U	0.044 U	0.047 U	0.045 U	0.044 U
Dichlorodifluoromethane (CFC-12)	mg/kg	3.1 U	0.087 U	0.081 U	0.089 U	0.086 U	0.091 U	0.087 U	0.083 U	0.085 U	0.076 U	0.083 U	0.08 U	0.082 U	0.088 U	0.093 U	0.09 U	0.088 U
Ethylbenzene	mg/kg	1.5 U	0.044 U	0.041 U	0.044 U	0.043 U	0.046 U	0.044 U	0.14	0.12	0.038 U	0.015 J	0.04 U	0.041 U	0.044 U	0.047 U	0.045 U	0.044 U
Isopropyl benzene	mg/kg	7.7 U	0.22 U	0.2 U	0.22 U	0.21 U	0.23 U	0.22 U	0.21 U	0.21 U	0.19 U	0.21 U	0.2 U	0.21 U	0.22 U	0.23 U	0.23 U	0.22 U
Methyl acetate	mg/kg	37 U	0.078 J	0.029 J	0.071 J	1 U	1.1 U	1 U	1 U	1 U	0.92 U	0.048 J	0.96 U	0.99 U	1.1 U	1.1 U	1.1 U	1.1 U
Methyl cyclohexane	mg/kg	37 U	1 U	0.97 U	1.1 U	1 U	1.1 U	1 U	1 U	1 U	0.92 U	0.99 U	0.96 U	0.99 U	1.1 U	1.1 U	1.1 U	1.1 U
Methyl tert butyl ether (MTBE)	mg/kg	7.7 U	0.22 U	0.2 U	0.22 U	0.21 U	0.23 U	0.22 U	0.21 U	0.21 U	0.19 U	0.21 U	0.2 U	0.21 U	0.22 U	0.23 U	0.23 U	0.22 U
Methylene chloride	mg/kg	7.7 U	0.22 U	0.2 U	0.22 U	0.21 U	0.23 U	0.22 U	0.21 U	0.21 U	0.19 U	0.21 U	0.2 U	0.21 U	0.22 U	0.23 U	0.23 U	0.22 U
Styrene	mg/kg	1.5 U	0.044 U	0.041 U	0.044 U	0.043 U	0.046 U	0.044 U	0.041 U	0.043 U	0.038 U	0.041 U	0.04 U	0.041 U	0.044 U	0.047 U	0.045 U	0.044 U
Tetrachloroethene	mg/kg	**47**[bcdfg]	0.044 U	0.014 J	0.044 U	0.043 U	0.046 U	0.044 U	0.041 U	0.043 U	0.038 U	0.041 U	0.04 U	0.041 U	0.044 U	0.047 U	0.045 U	0.044 U
Toluene	mg/kg	3.1 U	0.018 J	0.081 U	0.089 U	0.086 U	0.091 U	0.087 U	0.083 U	0.024 J	0.076 U	0.083 U	0.08 U	0.082 U	0.088 U	0.093 U	0.09 U	0.088 U
trans-1,2-Dichloroethene	mg/kg	1.5 U	0.044 U	0.041 U	0.044 U	0.043 U	0.046 U	0.044 U	0.041 U	0.043 U	0.038 U	0.041 U	0.04 U	0.041 U	0.044 U	0.047 U	0.045 U	0.044 U
trans-1,3-Dichloropropene	mg/kg	1.5 U	0.044 U	0.041 U	0.044 U	0.043 U	0.046 U	0.044 U	0.041 U	0.043 U	0.038 U	0.041 U	0.04 U	0.041 U	0.044 U	0.047 U	0.045 U	0.044 U
Trichloroethene	mg/kg	**1 J**[bc]	0.02 J	0.041 U	0.044 U	0.043 U	0.046 U	0.044 U	0.041 U	0.043 U	0.038 U	0.041 U	0.04 U	0.041 U	0.044 U	0.047 U	0.045 U	0.044 U

TABLE 3.8

PART 201 CRITERIA EXCEEDANCES - SOIL
2013 RFI REPORT
FORMER GENERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation		*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*EAST01*	*EAST01*	*EAST01*	*EAST01*	*EAST01*	*EAST01*	*EAST01*	*EAST01*	*EAST01*	*EAST01*	*EAST01*	*EAST01*	*EAST01*	*EAST01*
Perimeter Status (1)		*Y*	*Y*	*Y*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*
Sample Location		*CRA-856SB*	*CRA-857SB*	*CRA-857SB*	*CRA-767SB*	*CRA-767SB*	*CRA-769SB*	*CRA-769SB*	*CRA-770SB*	*CRA-770SB*	*CRA-771SB*	*CRA-771SB*	*CRA-773SB*	*CRA-773SB*	*CRA-774SB*	*CRA-775M*	*CRA-775M*	*CRA-775M*
Sample Identification (SO-17358-)		*032113-DR-008*	*032113-DR-001*	*032113-DR-002*	*030712-CB-149*	*030712-CB-150*	*030612-CB-130*	*030612-CB-131*	*032612-CB-253*	*032612-CB-254*	*030712-CB-145*	*030712-CB-146*	*030812-CB-175*	*030812-CB-176*	*032612-CB-252*	*032612-CB-249*	*032612-CB-250*	*032612-CB-251*
Sample Date		*3/21/2013*	*3/21/2013*	*3/21/2013*	*3/7/2012*	*3/7/2012*	*3/6/2012*	*3/6/2012*	*3/26/2012*	*3/26/2012*	*3/7/2012*	*3/7/2012*	*3/8/2012*	*3/8/2012*	*3/26/2012*	*3/26/2012*	*3/26/2012*	*3/26/2012*
Sample Depth		*(5-7) ft BGS*	*(0-2) ft BGS*	*(5-7) ft BGS*	*(1-3) ft BGS*	*(3-5) ft BGS*	*(1-3) ft BGS*	*(4-6) ft BGS*	*(1-3) ft BGS*	*(3-5) ft BGS*	*(1-3) ft BGS*	*(3-5) ft BGS*	*(1-3) ft BGS*	*(6-8) ft BGS*	*(1.5-3.25) ft BGS*	*(0.5-2.5) ft BGS*	*(2.5-4.5) ft BGS*	*(4.5-6) ft BGS*
Sample Type																		
	Units																	
VOCs Continued																		
Trichlorofluoromethane (CFC-11)	mg/kg	3.1 U	0.087 U	0.081 U	0.089 U	0.086 U	0.091 U	0.087 U	0.083 U	0.085 U	0.076 U	0.083 U	0.08 U	0.082 U	0.088 U	0.093 U	0.09 U	0.088 U
Trifluorotrichloroethane (Freon 113)	mg/kg	7.7 U	0.22 U	0.2 U	0.22 U	0.21 U	0.23 U	0.22 U	0.21 U	0.21 U	0.19 U	0.21 U	0.2 U	0.21 U	0.22 U	0.23 U	0.23 U	0.22 U
Vinyl chloride	mg/kg	1.2 U	0.035 U	0.032 U	0.036 U	0.034 U	0.036 U	0.035 U	0.033 U	0.034 U	0.031 U	0.033 U	0.032 U	0.033 U	0.035 U	0.037 U	0.036 U	0.035 U
Xylenes (total)	mg/kg	4.6 U	0.13 U	0.12 U	0.13 U	0.0095 J	0.14 U	0.13 U	1[d]	0.62	0.11 U	0.12 U	0.12 U	0.12 U	0.13 U	0.14 U	0.14 U	0.13 U
Semi-Volatile Organic Compounds (SVOCs)																		
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	mg/kg	-	-	-	5.9 U	0.29 U	0.27 U	1.1 U	27 U	15 U	2.7 U	1.4 U	2.8 U	0.27 U	0.29 U	0.28 U	15 U	5.7 U
2,4,5-Trichlorophenol	mg/kg	-	-	-	5.9 U	0.29 U	0.27 U	1.1 U	27 U	15 U	2.7 U	1.4 U	2.8 U	0.27 U	0.29 U	0.28 U	15 U	5.7 U
2,4,6-Trichlorophenol	mg/kg	-	-	-	5.9 U	0.29 U	0.27 U	1.1 U	27 U	15 U	2.7 U	1.4 U	2.8 U	0.27 U	0.29 U	0.28 U	15 U	5.7 U
2,4-Dichlorophenol	mg/kg	-	-	-	5.9 U	0.29 U	0.27 U	1.1 U	27 U	15 U	2.7 U	1.4 U	2.8 U	0.27 U	0.29 U	0.28 U	15 U	5.7 U
2,4-Dimethylphenol	mg/kg	-	-	-	5.9 U	0.29 U	0.27 U	1.1 U	27 U	15 U	2.7 U	1.4 U	2.8 U	0.27 U	0.29 U	0.28 U	15 U	5.7 U
2,4-Dinitrophenol	mg/kg	-	-	-	3.4 U	0.16 U	0.16 U	0.63 U	16 U	8.5 U	1.6 U	0.79 U	1.6 U	0.15 U	0.16 U	R	8.3 U	3.3 U
2,4-Dinitrotoluene	mg/kg	-	-	-	5.9 U	0.29 U	0.27 U	1.1 U	27 U	15 U	2.7 U	1.4 U	2.8 U	0.27 U	0.29 U	0.28 U	15 U	5.7 U
2,6-Dinitrotoluene	mg/kg	-	-	-	5.9 U	0.29 U	0.27 U	1.1 U	27 U	15 U	2.7 U	1.4 U	2.8 U	0.27 U	0.29 U	0.28 U	15 U	5.7 U
2-Chloronaphthalene	mg/kg	-	-	-	5.9 U	0.29 U	0.27 U	1.1 U	27 U	15 U	2.7 U	1.4 U	2.8 U	0.27 U	0.29 U	0.28 U	15 U	5.7 U
2-Chlorophenol	mg/kg	-	-	-	5.9 U	0.29 U	0.27 U	1.1 U	27 U	15 U	2.7 U	1.4 U	2.8 U	0.27 U	0.29 U	0.28 U	15 U	5.7 U
2-Methylnaphthalene	mg/kg	-	-	-	5.9 U	0.12 J	0.27 U	1.1 U	1.9 J	3.5 J	0.55 J	0.51 J	2.8 U	0.27 U	0.29 U	0.28 U	15 U	5.7 U
2-Methylphenol	mg/kg	-	-	-	5.9 U	0.29 U	0.27 U	1.1 U	27 U	15 U	2.7 U	1.4 U	2.8 U	0.27 U	0.29 U	0.28 U	15 U	5.7 U
2-Nitroaniline	mg/kg	-	-	-	4.5 U	0.22 U	0.21 U	0.84 U	21 U	11 U	2.1 U	1 U	2.1 U	0.21 U	0.22 U	0.21 U	11 U	4.3 U
2-Nitrophenol	mg/kg	-	-	-	5.9 U	0.29 U	0.27 U	1.1 U	27 U	15 U	2.7 U	1.4 U	2.8 U	0.27 U	0.29 U	0.28 U	15 U	5.7 U
3&4-Methylphenol	mg/kg	-	-	-	5.9 U	0.29 U	0.27 U	1.1 U	27 U	15 U	2.7 U	1.4 U	2.8 U	0.27 U	0.29 U	0.28 U	15 U	5.7 U
3,3'-Dichlorobenzidine	mg/kg	-	-	-	36 U	1.7 U	1.7 U	6.7 U	170 U	90 U	17 U	8.4 U	17 U	1.7 U	1.8 U	1.7 U	89 U	35 U
3-Nitroaniline	mg/kg	-	-	-	4.5 U	0.22 U	0.21 U	0.84 U	21 U	11 U	2.1 U	1 U	2.1 U	0.21 U	0.22 U	0.21 U	11 U	4.3 U
4,6-Dinitro-2-methylphenol	mg/kg	-	-	-	3.4 U	0.16 U	0.16 U	0.63 U	16 U	8.5 U	1.6 U	0.79 U	1.6 U	0.15 U	0.16 U	R	8.3 U	3.3 U
4-Bromophenyl phenyl ether	mg/kg	-	-	-	5.9 U	0.29 U	0.27 U	1.1 U	27 U	15 U	2.7 U	1.4 U	2.8 U	0.27 U	0.29 U	0.28 U	15 U	5.7 U
4-Chloro-3-methylphenol	mg/kg	-	-	-	5.9 U	0.29 U	0.27 U	1.1 U	27 U	15 U	2.7 U	1.4 U	2.8 U	0.27 U	0.29 U	0.28 U	15 U	5.7 U
4-Chloroaniline	mg/kg	-	-	-	4.5 U	0.22 U	0.21 U	0.84 U	21 U	11 U	2.1 U	1 U	2.1 U	0.21 U	0.22 U	0.21 U	11 U	4.3 U
4-Chlorophenyl phenyl ether	mg/kg	-	-	-	5.9 U	0.29 U	0.27 U	1.1 U	27 U	15 U	2.7 U	1.4 U	2.8 U	0.27 U	0.29 U	0.28 U	15 U	5.7 U
4-Nitroaniline	mg/kg	-	-	-	4.5 U	0.22 U	0.21 U	0.84 U	21 U	11 U	2.1 U	1 U	2.1 U	0.21 U	0.22 U	0.21 U	11 U	4.3 U
4-Nitrophenol	mg/kg	-	-	-	7.4 U	0.36 U	0.34 U	1.4 U	34 U	19 U	3.4 U	1.7 U	3.5 U	0.34 U	0.36 U	R	18 U	7.2 U
Acenaphthene	mg/kg	-	-	-	5.9 U	0.29 U	0.27 U	0.021 J	27 U	15 U	0.37 J	0.21 J	2.8 U	0.27 U	0.29 U	0.28 U	15 U	5.7 U
Acenaphthylene	mg/kg	-	-	-	5.9 U	0.29 U	0.27 U	1.1 U	27 U	15 U	2.7 U	1.4 U	2.8 U	0.27 U	0.29 U	0.28 U	15 U	5.7 U
Acetophenone	mg/kg	-	-	-	5.9 U	0.29 U	0.27 U	1.1 U	27 U	15 U	2.7 U	1.4 U	2.8 U	0.27 U	0.29 U	0.28 U	15 U	5.7 U
Anthracene	mg/kg	-	-	-	5.9 U	0.29 U	0.27 U	1.1 U	27 U	15 U	0.34 J	0.19 J	0.037 J	0.009 J	0.29 U	0.013 J	15 U	5.7 U
Atrazine	mg/kg	-	-	-	0.89 U	0.043 U	0.041 U	0.17 U	4.1 U	2.3 U	0.41 U	0.21 U	0.42 U	0.041 U	0.044 U	0.043 U	2.2 U	0.87 U
Benzaldehyde	mg/kg	-	-	-	5.9 U	0.29 U	0.27 U	1.1 U	27 U	15 U	R	R	2.8 U	0.27 U	0.29 U	0.28 U	15 U	5.7 U
Benzo(a)anthracene	mg/kg	-	-	-	0.34 J	0.29 U	0.27 U	1.1 U	27 U	15 U	2.7 U	1.4 U	2.8 U	0.021 J	0.29 U	0.023 J	15 U	5.7 U
Benzo(a)pyrene	mg/kg	-	-	-	0.24 J	0.29 U	0.27 U	1.1 U	27 U	15 U	0.38 J	0.26 J	0.046 J	0.012 J	0.29 U	0.02 J	15 U	5.7 U
Benzo(b)fluoranthene	mg/kg	-	-	-	0.34 J	0.29 U	0.0057 J	0.017 J	27 U	15 U	0.35 J	0.32 J	0.053 J	0.018 J	0.29 U	0.034 J	15 U	5.7 U
Benzo(g,h,i)perylene	mg/kg	-	-	-	0.2 J	0.29 U	0.0056 J	1.1 U	27 U	15 U	0.13 J	0.11 J	0.13 J	0.032 J	0.29 U	0.016 J	15 U	5.7 U
Benzo(k)fluoranthene	mg/kg	-	-	-	0.21 J	0.29 U	0.27 U	1.1 U	27 U	15 U	0.18 J	0.075 J	2.8 U	0.0085 J	0.29 U	0.01 J	15 U	5.7 U
Biphenyl (1,1-Biphenyl)	mg/kg	-	-	-	5.9 U	0.29 U	0.27 U	1.1 U	27 U	15 U	0.3 J	0.34 J	2.8 U	0.27 U	0.29 U	0.28 U	15 U	5.7 U
bis(2-Chloroethoxy)methane	mg/kg	-	-	-	5.9 U	0.29 U	0.27 U	1.1 U	27 U	15 U	2.7 U	1.4 U	2.8 U	0.27 U	0.29 U	0.28 U	15 U	5.7 U
bis(2-Chloroethyl)ether	mg/kg	-	-	-	1.8 U	0.086 U	0.083 U	0.33 U	8.3 U	4.5 U	0.83 U	0.42 U	0.84 U	0.083 U	0.088 U	0.086 U	4.4 U	1.7 U
bis(2-Ethylhexyl)phthalate (DEHP)	mg/kg	-	-	-	2.4 J	0.029 J	0.27 U	1.1 U	27 U	15 U	2.7 U	1.4 U	2.8 U	0.2 J	0.29 U	0.041 J	15 U	5.7 U

TABLE 3.8

PART 201 CRITERIA EXCEEDANCES - SOIL
2013 RFI REPORT
FORMER GENERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation		*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*EAST01*	*EAST01*	*EAST01*	*EAST01*	*EAST01*	*EAST01*	*EAST01*	*EAST01*	*EAST01*	*EAST01*	*EAST01*	*EAST01*	*EAST01*	*EAST01*
Perimeter Status (1)		*Y*	*Y*	*Y*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*
Sample Location		*CRA-856SB*	*CRA-857SB*	*CRA-857SB*	*CRA-767SB*	*CRA-767SB*	*CRA-769SB*	*CRA-769SB*	*CRA-770SB*	*CRA-770SB*	*CRA-771SB*	*CRA-771SB*	*CRA-773SB*	*CRA-773SB*	*CRA-774SB*	*CRA-775M*	*CRA-775M*	*CRA-775M*
Sample Identification (SO-17358-)		*032113-DR-008*	*032113-DR-001*	*032113-DR-002*	*030712-CB-149*	*030712-CB-150*	*030612-CB-130*	*030612-CB-131*	*032612-CB-253*	*032612-CB-254*	*030712-CB-145*	*030712-CB-146*	*030812-CB-175*	*030812-CB-176*	*032612-CB-252*	*032612-CB-249*	*032612-CB-250*	*032612-CB-251*
Sample Date		*3/21/2013*	*3/21/2013*	*3/21/2013*	*3/7/2012*	*3/7/2012*	*3/6/2012*	*3/6/2012*	*3/26/2012*	*3/26/2012*	*3/7/2012*	*3/7/2012*	*3/8/2012*	*3/8/2012*	*3/26/2012*	*3/26/2012*	*3/26/2012*	*3/26/2012*
Sample Depth		*(5-7) ft BGS*	*(0-2) ft BGS*	*(5-7) ft BGS*	*(1-3) ft BGS*	*(3-5) ft BGS*	*(1-3) ft BGS*	*(4-6) ft BGS*	*(1-3) ft BGS*	*(3-5) ft BGS*	*(1-3) ft BGS*	*(3-5) ft BGS*	*(1-3) ft BGS*	*(6-8) ft BGS*	*(1.5-3.25) ft BGS*	*(0.5-2.5) ft BGS*	*(2.5-4.5) ft BGS*	*(4.5-6) ft BGS*
Sample Type																		
	Units																	
SVOCs Continued																		
Butyl benzylphthalate (BBP)	mg/kg	-	-	-	5.9 U	0.29 U	0.27 U	1.1 U	27 U	15 U	2.7 U	1.4 U	2.8 U	0.12 J	0.29 U	0.28 U	15 U	5.7 U
Caprolactam	mg/kg	-	-	-	5.9 U	0.29 U	0.27 U	1.1 U	27 U	15 U	2.7 U	1.4 U	2.8 U	0.27 U	0.29 U	0.28 U	15 U	5.7 U
Carbazole	mg/kg	-	-	-	5.9 U	0.29 U	0.27 U	1.1 U	27 U	15 U	2.7 U	1.4 U	2.8 U	0.27 U	0.29 U	0.28 U	15 U	5.7 U
Chrysene	mg/kg	-	-	-	0.35 J	0.29 U	0.27 U	1.1 U	27 U	15 U	2.7 U	1.4 U	0.12 J	0.032 J	0.29 U	0.022 J	15 U	5.7 U
Dibenz(a,h)anthracene	mg/kg	-	-	-	5.9 U	0.29 U	0.27 U	1.1 U	27 U	15 U	2.7 U	1.4 U	2.8 U	0.27 U	0.29 U	0.28 U	15 U	5.7 U
Dibenzofuran	mg/kg	-	-	-	5.9 U	0.29 U	0.0044 J	0.032 J	27 U	15 U	0.21 J	1.4 U	2.8 U	0.27 U	0.29 U	0.28 U	15 U	5.7 U
Diethyl phthalate	mg/kg	-	-	-	5.9 U	0.29 U	0.27 U	1.1 U	27 U	15 U	2.7 U	1.4 U	2.8 U	0.27 U	0.29 U	0.28 U	15 U	5.7 U
Dimethyl phthalate	mg/kg	-	-	-	5.9 U	0.29 U	0.27 U	1.1 U	27 U	15 U	2.7 U	1.4 U	2.8 U	0.27 U	0.29 U	0.28 U	15 U	5.7 U
Di-n-butylphthalate (DBP)	mg/kg	-	-	-	5.9 U	0.29 U	0.27 U	1.1 U	27 U	15 U	2.7 U	1.4 U	2.8 U	0.27 U	0.29 U	0.28 U	15 U	5.7 U
Di-n-octyl phthalate (DnOP)	mg/kg	-	-	-	5.9 U	0.29 U	0.27 U	1.1 U	27 U	15 U	2.7 U	1.4 U	2.8 U	0.27 U	0.29 U	0.28 U	15 U	5.7 U
Fluoranthene	mg/kg	-	-	-	1 J	0.29 U	0.0036 J	0.029 J	27 U	15 U	1.4 J	0.85 J	0.14 J	0.079 J	0.29 U	0.056 J	15 U	5.7 U
Fluorene	mg/kg	-	-	-	0.15 J	0.29 U	0.0044 J	0.043 J	27 U	15 U	0.58 J	0.38 J	2.8 U	0.27 U	0.29 U	0.0056 J	15 U	5.7 U
Hexachlorobenzene	mg/kg	-	-	-	5.9 U	0.29 U	0.27 U	1.1 U	27 U	15 U	2.7 U	1.4 U	2.8 U	0.27 U	0.29 U	0.28 U	15 U	5.7 U
Hexachlorobutadiene	mg/kg	-	-	-	0.89 U	0.043 U	0.041 U	0.17 U	4.1 U	2.3 U	0.41 U	0.21 U	0.42 U	0.041 U	0.044 U	0.043 U	2.2 U	0.87 U
Hexachlorocyclopentadiene	mg/kg	-	-	-	5.9 U	0.29 U	0.27 U	1.1 U	27 U	15 U	2.7 U	1.4 U	2.8 U	0.27 U	0.29 U	R	15 U	5.7 U
Hexachloroethane	mg/kg	-	-	-	5.9 U	0.29 U	0.27 U	1.1 U	27 U	15 U	2.7 U	1.4 U	2.8 U	0.27 U	0.29 U	0.28 U	15 U	5.7 U
Indeno(1,2,3-cd)pyrene	mg/kg	-	-	-	5.9 U	0.29 U	0.004 J	1.1 U	27 U	15 U	0.14 J	0.096 J	0.067 J	0.021 J	0.29 U	0.012 J	15 U	5.7 U
Isophorone	mg/kg	-	-	-	5.9 U	0.29 U	0.27 U	1.1 U	27 U	15 U	2.7 U	1.4 U	2.8 U	0.27 U	0.29 U	0.28 U	15 U	5.7 U
Naphthalene	mg/kg	-	-	-	5.9 U	0.052 J	0.27 U	1.1 U	27 U	15 U	0.13 J	0.13 J	2.8 U	0.27 U	0.29 U	0.28 U	15 U	5.7 U
Nitrobenzene	mg/kg	-	-	-	5.9 U	0.29 U	0.27 U	1.1 U	27 U	15 U	2.7 U	1.4 U	2.8 U	0.27 U	0.29 U	0.28 U	15 U	5.7 U
N-Nitrosodi-n-propylamine	mg/kg	-	-	-	5.9 U	0.29 U	0.27 U	1.1 U	27 U	15 U	2.7 U	1.4 U	2.8 U	0.27 U	0.29 U	0.28 U	15 U	5.7 U
N-Nitrosodiphenylamine	mg/kg	-	-	-	5.9 U	0.29 U	0.27 U	1.1 U	2.8 J	15 U	2.7 U	1.4 U	2.8 U	0.27 U	0.29 U	0.28 U	15 U	5.7 U
Pentachlorophenol	mg/kg	-	-	-	3.4 U	0.16 U	0.16 U	0.63 U	16 U	8.5 U	1.6 U	0.79 U	1.6 U	0.15 U	0.16 U	R	8.3 U	3.3 U
Phenanthrene	mg/kg	-	-	-	0.87 J	0.29 U	0.27 U	0.11 J	27 U	15 U	2 J	1.2 J	0.072 J	0.061 J	0.29 U	0.045 J	15 U	5.7 U
Phenol	mg/kg	-	-	-	5.9 U	0.29 U	0.27 U	1.1 U	27 U	15 U	2.7 U	1.4 U	2.8 U	0.27 U	0.29 U	0.28 U	15 U	5.7 U
Pyrene	mg/kg	-	-	-	0.59 J	0.29 U	0.0073 J	0.04 J	27 U	15 U	1 J	0.7 J	0.19 J	0.066 J	0.29 U	0.049 J	15 U	5.7 U
Metals																		
Aluminum	mg/kg	-	-	-	4900	1800	1700	2100	2200	3100	2500	2500	2500	1400	4100	1700	1800	1600
Antimony	mg/kg	-	-	-	0.024 J	0.17 UJ	0.054 J	0.052 J	0.091 J	0.024 J	0.082 J	0.04 J	0.043 J	0.15 UJ	0.071 J	0.069 J	0.12 J	0.065 J
Arsenic	mg/kg	-	-	-	3.8	0.49	3.2	3.1	1.8	0.8	5.3	**15**[cd]	2.6	1.6	3	4.1	**7.3**[cd]	3.1
Barium	mg/kg	-	-	-	21	9.3	8.5	9.2	260	19	32	13	15	6.3	20	8.2	65	9
Beryllium	mg/kg	-	-	-	0.21	0.17 U	0.065 J	0.067 J	0.12 J	0.12 J	0.12 J	0.18	0.16 U	0.15 U	0.23	0.11 J	0.12 J	0.11 J
Cadmium	mg/kg	-	-	-	0.2	0.044 J	0.16	0.2	0.096	0.077 U	0.24	0.22	0.077 J	0.07 J	0.048 J	0.064 J	0.13	0.067 J
Calcium	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chromium	mg/kg	-	-	-	11	4.1	4.7	6.4	5.7	6.5	7.6	6.7	5.2	4.7	7.6	5	5	5.4
Chromium III (trivalent)	mg/kg	-	-	-	-	-	4.7	6.4	-	-	-	-	-	-	7.6	-	-	-
Chromium VI (hexavalent)	mg/kg	-	-	-	-	-	0.82 U	0.83 U	-	-	-	-	-	-	0.88 U	-	-	-
Cobalt	mg/kg	-	-	-	3.3	1.5	2.1	2.5	1.9	2	3.1	1.7	2.3	2.1	2.8	2.2	2.2	2.1
Copper	mg/kg	-	-	-	9.1 J	3.9	5.7	6.6	6	3.5	10 J	3.5 J	7	7	8.4	5.6	6.2	5.3
Iron	mg/kg	-	-	-	8500	2500	5400	5800	3900	3700	9600	**23000**[c]	5900	3900	7100	5300	9000	4900
Lead	mg/kg	-	-	-	5.2	2.6	2.8	3.4	14	4.9	4.9	3.3	6.1	3	4.8	3.4	2.5	3.2
Lead - coarse fraction	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lead - fine fraction	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lead - total (calculated by fine/coarse fraction)	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Magnesium	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

TABLE 3.8

PART 201 CRITERIA EXCEEDANCES - SOIL
2013 RFI REPORT
FORMER GENERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation		*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*EAST01*	*EAST01*	*EAST01*	*EAST01*	*EAST01*	*EAST01*	*EAST01*	*EAST01*	*EAST01*	*EAST01*	*EAST01*	*EAST01*	*EAST01*	*EAST01*
Perimeter Status (1)		*Y*	*Y*	*Y*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*
Sample Location		*CRA-856SB*	*CRA-857SB*	*CRA-857SB*	*CRA-767SB*	*CRA-767SB*	*CRA-769SB*	*CRA-769SB*	*CRA-770SB*	*CRA-770SB*	*CRA-771SB*	*CRA-771SB*	*CRA-773SB*	*CRA-773SB*	*CRA-774SB*	*CRA-775M*	*CRA-775M*	*CRA-775M*
Sample Identification (SO-17358-)		*032113-DR-008*	*032113-DR-001*	*032113-DR-002*	*030712-CB-149*	*030712-CB-150*	*030612-CB-130*	*030612-CB-131*	*032612-CB-253*	*032612-CB-254*	*030712-CB-145*	*030712-CB-146*	*030812-CB-175*	*030812-CB-176*	*032612-CB-252*	*032612-CB-249*	*032612-CB-250*	*032612-CB-251*
Sample Date		*3/21/2013*	*3/21/2013*	*3/21/2013*	*3/7/2012*	*3/7/2012*	*3/6/2012*	*3/6/2012*	*3/26/2012*	*3/26/2012*	*3/7/2012*	*3/7/2012*	*3/8/2012*	*3/8/2012*	*3/26/2012*	*3/26/2012*	*3/26/2012*	*3/26/2012*
Sample Depth		*(5-7) ft BGS*	*(0-2) ft BGS*	*(5-7) ft BGS*	*(1-3) ft BGS*	*(3-5) ft BGS*	*(1-3) ft BGS*	*(4-6) ft BGS*	*(1-3) ft BGS*	*(3-5) ft BGS*	*(1-3) ft BGS*	*(3-5) ft BGS*	*(1-3) ft BGS*	*(6-8) ft BGS*	*(1.5-3.25) ft BGS*	*(0.5-2.5) ft BGS*	*(2.5-4.5) ft BGS*	*(4.5-6) ft BGS*
Sample Type																		
	Units																	
Metals Continued																		
Manganese	mg/kg	-	-	-	250	26	180	190	98 J	38 J	300	180	230	120	100 J	150 J	**1200 J[cd]**	140 J
Mercury	mg/kg	-	-	-	0.019 J	0.045 U	0.045 U	0.041 U	0.044 U	0.041 U	0.019 J	0.041 U	0.019 J	0.042 U	0.024 J	0.041 U	0.045 U	0.044 U
Nickel	mg/kg	-	-	-	9.1	4	5.7	6.7	5.1	5.3	8.3	4.2	6.1	4.7	8.7	5.8	7.4	5.6
Potassium	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Selenium	mg/kg	-	-	-	**0.62[d]**	0.21	0.14 J	0.17	0.29 J	0.3 J	0.3	0.31	0.29 J	0.18 J	0.35 J	0.21 J	0.23 J	0.21 J
Silver	mg/kg	-	-	-	0.08 U	0.085 U	0.076 U	0.076 U	0.014 J	0.019 J	0.072 U	0.075 U	0.079 U	0.077 U	0.073 U	0.079 U	0.084 U	0.073 U
Sodium	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Thallium	mg/kg	-	-	-	0.072 J	0.1 U	0.069 J	0.084	0.075 U	0.077 U	0.16	0.029 J	0.084 U	0.081 U	0.11	0.12	0.22	0.096 U
Vanadium	mg/kg	-	-	-	14	4.9	6.6	8.1	6.6	7.7	10	22	8.7	5.4	12	6.7	9.1	6.9
Zinc	mg/kg	-	-	-	22	12	17	19	110	19	33	16	26	11	20	20	120	22
Polychlorinated biphenyls (PCBs)																		
Aroclor-1016 (PCB-1016)	mg/kg	-	-	-	3.7 U	0.036 U	0.034 U	0.034 U	3.4 U	0.37 U	0.034 U	0.035 U	0.035 U	0.034 U	0.036 U	0.035 U	3.6 U	0.36 U
Aroclor-1221 (PCB-1221)	mg/kg	-	-	-	3.7 U	0.036 U	0.034 U	0.034 U	3.4 U	0.37 U	0.034 U	0.035 U	0.035 U	0.034 U	0.036 U	0.035 U	3.6 U	0.36 U
Aroclor-1232 (PCB-1232)	mg/kg	-	-	-	3.7 U	0.036 U	0.034 U	0.034 U	3.4 U	0.37 U	0.034 U	0.035 U	0.035 U	0.034 U	0.036 U	0.035 U	3.6 U	0.36 U
Aroclor-1242 (PCB-1242)	mg/kg	-	-	-	3.7 U	0.036 U	0.034 U	0.034 U	3.4 U	0.37 U	0.034 U	0.035 U	0.035 U	0.034 U	0.036 U	0.035 U	3.6 U	0.36 U
Aroclor-1248 (PCB-1248)	mg/kg	-	-	-	3.7 U	0.036 U	0.034 U	0.034 U	3.4 U	0.37 U	0.034 U	0.035 U	0.035 U	0.034 U	0.036 U	0.035 U	3.6 U	0.36 U
Aroclor-1254 (PCB-1254)	mg/kg	-	-	-	3.7 U	0.036 U	0.034 U	0.034 U	3.4 U	0.37 U	0.034 U	0.035 U	0.035 U	0.034 U	0.036 U	0.035 U	3.6 U	0.36 U
Aroclor-1260 (PCB-1260)	mg/kg	-	-	-	3.7 U	0.036 U	0.034 U	0.034 U	3.4 U	0.37 U	0.034 U	0.035 U	0.035 U	0.034 U	0.036 U	0.035 U	3.6 U	0.36 U
Aroclor-1262 (PCB-1262)	mg/kg	-	-	-	-	-	-	-	3.4 U	0.37 U	-	-	-	-	0.036 U	0.035 U	3.6 U	0.36 U
Aroclor-1268 (PCB-1268)	mg/kg	-	-	-	-	-	-	-	3.4 U	0.37 U	-	-	-	-	0.036 U	0.035 U	3.6 U	0.36 U
Total PCBs	mg/kg	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Notes

Michigan Part 201 generic clean up criteria (updated September 28, 2012)

ID - Insufficient data to develop criterion

NLV - Hazardous substance is not likely to volatilize under most conditions

NA - Criterion or value is not available

Perimeter Status (1) - N - non-perimeter, Y - perimeter

mg/kg - milligram/kilogram

Notes:

U - Not detected at the associated reporting limit.

J - Estimated concentration.

UJ - Not detected; associated reporting limit is estimated.

R - Rejected

TABLE 3.8

PART 201 CRITERIA EXCEEDANCES - SOIL
2013 RFI REPORT
FORMER GENERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation		*EAST01*	*EAST01*	*EAST01*	*EAST01*	*EAST01*	*EAST01*	*EAST01*	*EAST01*	*EAST01*	*EAST01*	*EAST01*	*EAST01*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*
Perimeter Status (1)		*N*	*N*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*N*	*N*	*N*	*N*	*N*
Sample Location		*CRA-824SB*	*CRA-824SB*	*CRA-702SB*	*CRA-702SB*	*CRA-772SB*	*CRA-826ML*	*CRA-828M*	*CRA-828M*	*CRA-829M*	*CRA-829M*	*CRA-836SB*	*CRA-836SB*	*CRA-756M*	*CRA-756M*	*CRA-757M*	*CRA-757M*	*CRA-758SB*
Sample Identification (SO-17358-)		*030712-CB-147*	*030712-CB-148*	*022112-DR-039*	*022112-DR-040*	*031412-CB-195*	*031412-CB-196*	*011712-DR-003*	*011712-DR-004*	*011712-DR-001*	*011712-DR-002*	*031512-DR-074*	*031512-DR-075*	*030212-CB-117*	*030212-CB-118*	*030512-CB-119*	*030512-CB-120*	*030112-CB-111*
Sample Date		*3/7/2012*	*3/7/2012*	*2/21/2012*	*2/21/2012*	*3/14/2012*	*3/14/2012*	*1/17/2012*	*1/17/2012*	*1/17/2012*	*1/17/2012*	*3/15/2012*	*3/15/2012*	*3/2/2012*	*3/2/2012*	*3/5/2012*	*3/5/2012*	*3/1/2012*
Sample Depth		*(1-3) ft BGS*	*(3.5-5.5) ft BGS*	*(1-2) ft BGS*	*(2-4) ft BGS*	*(1.5-3.5) ft BGS*	*(1-3) ft BGS*	*(0-2) ft BGS*	*(2-4) ft BGS*	*(0-2) ft BGS*	*(2.5-4.5) ft BGS*	*(0-2) ft BGS*	*(4-6) ft BGS*	*(0.5-2.5) ft BGS*	*(5-7) ft BGS*	*(1-3) ft BGS*	*(5-7) ft BGS*	*(0.5-2.5) ft BGS*
Sample Type																		
	Units																	
Volatile Organic Compounds (VOCs)																		
1,1,1-Trichloroethane	mg/kg	0.04 U	0.046 U	0.045 U	0.043 U	0.045 U	0.046 U	0.041 U	0.041 U	0.043 U	0.043 U	0.043 U	0.045 U	0.16 U	0.22 U	0.042 U	0.045 U	0.045 U
1,1,2,2-Tetrachloroethane	mg/kg	0.04 U	0.046 U	0.045 U	0.043 U	0.045 U	0.046 U	0.041 U	0.041 U	0.043 U	0.043 U	0.043 U	0.045 U	0.16 U	0.22 U	0.042 U	0.045 U	0.045 U
1,1,2-Trichloroethane	mg/kg	0.04 U	0.046 U	0.045 U	0.043 U	0.045 U	0.046 U	0.041 U	0.041 U	0.043 U	0.043 U	0.043 U	0.045 U	0.16 U	0.22 U	0.042 U	0.045 U	0.045 U
1,1-Dichloroethane	mg/kg	0.04 U	0.046 U	0.045 U	0.043 U	0.045 U	0.046 U	0.041 U	0.041 U	0.043 U	0.043 U	0.043 U	0.045 U	0.16 U	0.22 U	0.042 U	0.045 U	0.045 U
1,1-Dichloroethene	mg/kg	0.04 U	0.046 U	0.045 U	0.043 U	0.045 U	0.046 U	0.041 U	0.041 U	0.043 U	0.043 U	0.043 U	0.045 U	0.16 U	0.22 U	0.042 U	0.045 U	0.045 U
1,2,4-Trichlorobenzene	mg/kg	0.2 U	0.23 U	0.23 U	0.21 U	0.23 U	0.23 U	0.2 U	0.21 U	0.22 U	0.21 U	0.21 U	0.22 U	0.79 U	1.1 U	0.21 U	0.23 U	0.23 U
1,2-Dibromo-3-chloropropane (DBCP)	mg/kg	0.2 U	0.23 U	0.23 U	0.21 U	0.23 U	0.23 U	0.2 U	0.21 U	0.22 U	0.21 U	0.21 U	0.22 U	0.79 U	1.1 U	0.21 U	0.23 U	0.23 U
1,2-Dibromoethane (Ethylene dibromide)	mg/kg	0.2 U	0.23 U	0.23 U	0.21 U	0.23 U	0.23 U	0.2 U	0.21 U	0.22 U	0.21 U	0.21 U	0.22 U	0.79 U	1.1 U	0.21 U	0.23 U	0.23 U
1,2-Dichlorobenzene	mg/kg	0.079 U	0.092 U	0.09 U	0.085 U	0.09 U	0.092 U	0.081 U	0.082 U	0.087 U	0.086 U	0.085 U	0.089 U	0.32 U	0.44 U	0.084 U	0.091 U	0.09 U
1,2-Dichloroethane	mg/kg	0.04 U	0.046 U	0.045 U	0.043 U	0.045 U	0.046 U	0.041 U	0.041 U	0.043 U	0.043 U	0.043 U	0.045 U	0.16 U	0.22 U	0.042 U	0.045 U	0.045 U
1,2-Dichloropropane	mg/kg	0.04 U	0.046 U	0.045 U	0.043 U	0.045 U	0.046 U	0.041 U	0.041 U	0.043 U	0.043 U	0.043 U	0.045 U	0.16 U	0.22 U	0.042 U	0.045 U	0.045 U
1,3-Dichlorobenzene	mg/kg	0.079 U	0.092 U	0.09 U	0.085 U	0.09 U	0.092 U	0.081 U	0.082 U	0.087 U	0.086 U	0.085 U	0.089 U	0.32 U	0.44 U	0.084 U	0.091 U	0.09 U
1,4-Dichlorobenzene	mg/kg	0.079 U	0.092 U	0.09 U	0.085 U	0.09 U	0.092 U	0.081 U	0.082 U	0.087 U	0.086 U	0.085 U	0.089 U	0.32 U	0.44 U	0.084 U	0.091 U	0.09 U
2-Butanone (Methyl ethyl ketone) (MEK)	mg/kg	0.6 U	0.69 U	0.68 U	0.64 U	0.68 U	0.69 U	0.61 U	0.62 U	0.65 U	0.64 U	0.64 U	0.67 U	2.4 U	3.3 U	0.63 U	0.68 U	0.68 U
2-Hexanone	mg/kg	2 U	2.3 U	2.3 U	2.1 U	2.3 U	2.3 U	2 U	2.1 U	2.2 U	2.1 U	2.1 U	2.2 U	7.9 U	11 U	2.1 U	2.3 U	2.3 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	mg/kg	2 U	2.3 U	2.3 U	2.1 U	2.3 U	2.3 U	2 U	2.1 U	2.2 U	2.1 U	2.1 U	2.2 U	7.9 U	11 U	2.1 U	2.3 U	2.3 U
Acetone	mg/kg	0.6 U	0.69 U	0.68 U	0.64 U	0.68 U	0.69 U	0.61 U	0.62 U	0.65 U	0.64 U	0.64 U	0.67 U	2.4 U	3.3 U	0.63 U	0.68 U	0.68 U
Benzene	mg/kg	0.04 U	0.018 J	0.045 U	0.043 U	0.045 U	0.046 U	0.041 U	0.041 U	0.043 U	0.043 U	0.043 U	0.045 U	0.16 U	0.22 U	0.042 U	0.045 U	0.045 U
Bromodichloromethane	mg/kg	0.079 U	0.092 U	0.09 U	0.085 U	0.09 U	0.092 U	0.081 U	0.082 U	0.087 U	0.086 U	0.085 U	0.089 U	0.32 U	0.44 U	0.084 U	0.091 U	0.09 U
Bromoform	mg/kg	0.079 U	0.092 U	0.09 U	0.085 U	0.09 U	0.092 U	0.081 U	0.082 U	0.087 U	0.086 U	0.085 U	0.089 U	0.32 U	0.44 U	0.084 U	0.091 U	0.09 U
Bromomethane (Methyl bromide)	mg/kg	0.2 U	0.23 U	0.23 U	0.21 U	0.23 U	0.23 U	0.2 U	0.21 U	0.22 U	0.21 U	0.21 U	0.22 U	0.79 U	1.1 U	0.21 U	0.23 U	0.23 U
Carbon disulfide	mg/kg	0.2 U	0.23 U	0.23 U	0.21 U	0.23 U	0.36	0.2 U	0.21 U	0.22 U	0.21 U	0.21 U	0.22 U	0.79 U	1.1 U	0.21 U	0.23 U	0.23 U
Carbon tetrachloride	mg/kg	0.04 U	0.046 U	0.045 U	0.043 U	0.045 U	0.046 U	0.041 U	0.041 U	0.043 U	0.043 U	0.043 U	0.045 U	0.16 U	0.22 U	0.042 U	0.045 U	0.045 U
Chlorobenzene	mg/kg	0.04 U	0.2	0.045 U	0.043 U	0.045 U	0.046 U	0.041 U	0.041 U	0.043 U	0.043 U	0.043 U	0.045 U	0.16 U	0.22 U	0.042 U	0.045 U	0.045 U
Chloroethane	mg/kg	0.2 U	0.23 U	0.23 U	0.21 U	0.23 U	0.23 U	0.2 U	0.21 U	0.22 U	0.21 U	0.21 U	0.22 U	0.79 U	1.1 U	0.21 U	0.23 U	0.23 U
Chloroform (Trichloromethane)	mg/kg	0.04 U	0.046 U	0.045 U	0.043 U	0.045 U	0.046 U	0.041 U	0.041 U	0.043 U	0.043 U	0.043 U	0.045 U	0.16 U	0.22 U	0.042 U	0.045 U	0.045 U
Chloromethane (Methyl chloride)	mg/kg	0.2 U	0.23 U	0.23 U	0.21 U	0.23 U	0.23 U	0.2 U	0.21 U	0.22 U	0.21 U	0.21 U	0.22 U	0.79 U	1.1 U	0.21 U	0.23 U	0.23 U
cis-1,2-Dichloroethene	mg/kg	0.04 U	0.046 U	0.045 U	0.043 U	0.045 U	0.046 U	0.041 U	0.041 U	0.043 U	0.043 U	0.043 U	0.045 U	0.16 U	0.22 U	0.042 U	0.045 U	0.045 U
cis-1,3-Dichloropropene	mg/kg	0.04 U	0.046 U	0.045 U	0.043 U	0.045 U	0.046 U	0.041 U	0.041 U	0.043 U	0.043 U	0.043 U	0.045 U	0.16 U	0.22 U	0.042 U	0.045 U	0.045 U
Cyclohexane	mg/kg	0.95 U	1.1 U	1.1 U	1 U	1.1 U	1.1 U	0.97 U	0.99 U	1 U	1 U	1 U	1.1 U	3.8 U	5.3 U	1 U	1.1 U	1.1 U
Dibromochloromethane	mg/kg	0.04 U	0.046 U	0.045 U	0.043 U	0.045 U	0.046 U	0.041 U	0.041 U	0.043 U	0.043 U	0.043 U	0.045 U	0.16 U	0.22 U	0.042 U	0.045 U	0.045 U
Dichlorodifluoromethane (CFC-12)	mg/kg	0.079 U	0.092 U	0.09 U	0.085 U	0.09 U	0.092 U	0.081 U	0.082 U	0.087 U	0.086 U	0.085 U	0.089 U	0.32 U	0.44 U	0.084 U	0.091 U	0.09 U
Ethylbenzene	mg/kg	0.04 U	0.053	0.045 U	0.043 U	0.045 U	0.046 U	0.041 U	0.041 U	0.043 U	0.043 U	0.043 U	0.045 U	0.16 U	0.22 U	0.042 U	0.045 U	0.045 U
Isopropyl benzene	mg/kg	0.007 J	0.01 J	0.23 U	0.21 U	0.23 U	0.23 U	0.2 U	0.21 U	0.22 U	0.21 U	0.21 U	0.22 U	0.79 U	1.1 U	0.21 U	0.23 U	0.23 U
Methyl acetate	mg/kg	0.95 U	0.14 J	1.1 U	1 U	1.1 U	0.054 J	0.97 U	0.99 U	1 U	1 U	1 U	1.1 U	3.8 U	5.3 U	1 U	1.1 U	1.1 U
Methyl cyclohexane	mg/kg	0.018 J	1.1 U	1.1 U	1 U	1.1 U	1.1 U	0.97 U	0.99 U	1 U	1 U	1 U	1.1 U	0.12 J	5.3 U	1 U	1.1 U	1.1 U
Methyl tert butyl ether (MTBE)	mg/kg	0.2 U	0.23 U	0.23 U	0.21 U	0.23 U	0.23 U	0.2 U	0.21 U	0.22 U	0.21 U	0.21 U	0.22 U	0.79 U	1.1 U	0.21 U	0.23 U	0.23 U
Methylene chloride	mg/kg	0.2 U	0.23 U	0.23 U	0.21 U	0.23 U	0.23 U	0.2 U	0.21 U	0.22 U	0.21 U	0.21 U	0.22 U	0.79 U	1.1 U	0.21 U	0.23 U	0.23 U
Styrene	mg/kg	0.04 U	0.046 U	0.045 U	0.043 U	0.045 U	0.046 U	0.041 U	0.041 U	0.043 U	0.043 U	0.043 U	0.045 U	0.16 U	0.22 U	0.042 U	0.045 U	0.045 U
Tetrachloroethene	mg/kg	0.04 U	0.046 U	0.045 U	0.043 U	0.045 U	0.046 U	0.041 U	0.041 U	0.043 U	0.043 U	0.043 U	0.045 U	**6.6[cd]**	**14[cd]**	0.042 U	**0.13[c]**	0.045 U
Toluene	mg/kg	0.079 U	0.092 U	0.09 U	0.085 U	0.09 U	0.092 U	0.081 U	0.082 U	0.087 U	0.086 U	0.085 U	0.089 U	0.32 U	0.44 U	0.084 U	0.091 U	0.09 U
trans-1,2-Dichloroethene	mg/kg	0.04 U	0.046 U	0.045 U	0.043 U	0.045 U	0.046 U	0.041 U	0.041 U	0.043 U	0.043 U	0.043 U	0.045 U	0.16 U	0.22 U	0.042 U	0.045 U	0.045 U
trans-1,3-Dichloropropene	mg/kg	0.04 U	0.046 U	0.045 U	0.043 U	0.045 U	0.046 U	0.041 U	0.041 U	0.043 U	0.043 U	0.043 U	0.045 U	0.16 U	0.22 U	0.042 U	0.045 U	0.045 U
Trichloroethene	mg/kg	0.04 U	0.046 U	0.045 U	0.043 U	0.045 U	0.046 U	0.041 U	0.041 U	0.043 U	0.043 U	0.043 U	0.045 U	**0.3[c]**	**0.23[c]**	0.042 U	0.045 U	0.045 U

TABLE 3.8

PART 201 CRITERIA EXCEEDANCES - SOIL
2013 RFI REPORT
FORMER GENERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation		*EAST01*	*EAST01*	*EAST01*	*EAST01*	*EAST01*	*EAST01*	*EAST01*	*EAST01*	*EAST01*	*EAST01*	*EAST01*	*EAST01*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*
Perimeter Status (1)		*N*	*N*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*N*	*N*	*N*	*N*	*N*
Sample Location		*CRA-824SB*	*CRA-824SB*	*CRA-702SB*	*CRA-702SB*	*CRA-772SB*	*CRA-826ML*	*CRA-828M*	*CRA-828M*	*CRA-829M*	*CRA-829M*	*CRA-836SB*	*CRA-836SB*	*CRA-756M*	*CRA-756M*	*CRA-757M*	*CRA-757M*	*CRA-758SB*
Sample Identification (SO-17358-)		*030712-CB-147*	*030712-CB-148*	*022112-DR-039*	*022112-DR-040*	*031412-CB-195*	*031412-CB-196*	*011712-DR-003*	*011712-DR-004*	*011712-DR-001*	*011712-DR-002*	*031512-DR-074*	*031512-DR-075*	*030212-CB-117*	*030212-CB-118*	*030512-CB-119*	*030512-CB-120*	*030112-CB-111*
Sample Date		*3/7/2012*	*3/7/2012*	*2/21/2012*	*2/21/2012*	*3/14/2012*	*3/14/2012*	*1/17/2012*	*1/17/2012*	*1/17/2012*	*1/17/2012*	*3/15/2012*	*3/15/2012*	*3/2/2012*	*3/2/2012*	*3/5/2012*	*3/5/2012*	*3/1/2012*
Sample Depth		*(1-3) ft BGS*	*(3.5-5.5) ft BGS*	*(1-2) ft BGS*	*(2-4) ft BGS*	*(1.5-3.5) ft BGS*	*(1-3) ft BGS*	*(0-2) ft BGS*	*(2-4) ft BGS*	*(0-2) ft BGS*	*(2.5-4.5) ft BGS*	*(0-2) ft BGS*	*(4-6) ft BGS*	*(0.5-2.5) ft BGS*	*(5-7) ft BGS*	*(1-3) ft BGS*	*(5-7) ft BGS*	*(0.5-2.5) ft BGS*
Sample Type																		
	Units																	
VOCs Continued																		
Trichlorofluoromethane (CFC-11)	mg/kg	0.079 U	0.092 U	0.09 U	0.085 U	0.09 U	0.092 U	0.081 U	0.082 U	0.087 U	0.086 U	0.085 U	0.089 U	0.32 U	0.44 U	0.084 U	0.091 U	0.09 U
Trifluorotrichloroethane (Freon 113)	mg/kg	0.2 U	0.23 U	0.23 U	0.21 U	0.23 U	0.23 U	0.2 U	0.21 U	0.22 U	0.21 U	0.21 U	0.22 U	0.79 U	1.1 U	0.21 U	0.23 U	0.23 U
Vinyl chloride	mg/kg	0.032 U	0.037 U	0.036 U	0.034 U	0.036 U	0.037 U	0.032 U	0.033 U	0.035 U	0.034 U	0.034 U	0.036 U	0.13 U	0.18 U	0.034 U	0.036 U	0.036 U
Xylenes (total)	mg/kg	0.012 J	0.22	0.14 U	0.13 U	0.14 U	0.14 U	0.12 U	0.12 U	0.13 U	0.13 U	0.13 U	0.13 U	0.094 J	0.67 U	0.13 U	0.14 U	0.14 U
Semi-Volatile Organic Compounds (SVOCs)																		
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	mg/kg	1.4 U	0.3 U	0.3 U	0.3 U	0.29 U	0.3 U	0.29 U	0.29 U	0.28 U	0.28 U	0.3 U	0.3 U	5.6 U	0.28 U	0.3 U	0.27 U	5.7 U
2,4,5-Trichlorophenol	mg/kg	1.4 U	0.3 U	0.3 U	0.3 U	0.29 U	0.3 U	0.29 U	0.29 U	0.28 U	0.28 U	0.3 U	0.3 U	5.6 U	0.28 U	0.3 U	0.27 U	5.7 U
2,4,6-Trichlorophenol	mg/kg	1.4 U	0.3 U	0.3 U	0.3 U	0.29 U	0.3 U	0.29 U	0.29 U	0.28 U	0.28 U	0.3 U	0.3 U	5.6 U	0.28 U	0.3 U	0.27 U	5.7 U
2,4-Dichlorophenol	mg/kg	1.4 U	0.3 U	0.3 U	0.3 U	0.29 U	0.3 U	0.29 U	0.29 U	0.28 U	0.28 U	0.3 U	0.3 U	5.6 U	0.28 U	0.3 U	0.27 U	5.7 U
2,4-Dimethylphenol	mg/kg	1.4 U	0.3 U	0.3 U	0.3 U	0.29 U	0.3 U	0.29 U	0.29 U	0.28 U	0.28 U	0.3 U	0.3 U	5.6 U	0.28 U	0.3 U	0.27 U	5.7 U
2,4-Dinitrophenol	mg/kg	0.77 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.16 U	0.16 U	0.16 U	0.16 U	0.17 U	0.17 U	3.2 U	0.16 U	0.17 U	0.15 U	3.2 U
2,4-Dinitrotoluene	mg/kg	1.4 U	0.3 U	0.3 U	0.3 U	0.29 U	0.3 U	0.29 U	0.29 U	0.28 U	0.28 U	0.3 U	0.3 U	5.6 U	0.28 U	0.3 U	0.27 U	5.7 U
2,6-Dinitrotoluene	mg/kg	1.4 U	0.3 U	0.3 U	0.3 U	0.29 U	0.3 U	0.29 U	0.29 U	0.28 U	0.28 U	0.3 U	0.3 U	5.6 U	0.28 U	0.3 U	0.27 U	5.7 U
2-Chloronaphthalene	mg/kg	1.4 U	0.3 U	0.3 U	0.3 U	0.29 U	0.3 U	0.29 U	0.29 U	0.28 U	0.28 U	0.3 U	0.3 U	5.6 U	0.28 U	0.3 U	0.27 U	5.7 U
2-Chlorophenol	mg/kg	1.4 U	0.3 U	0.3 U	0.3 U	0.29 U	0.3 U	0.29 U	0.29 U	0.28 U	0.28 U	0.3 U	0.3 U	5.6 U	0.28 U	0.3 U	0.27 U	5.7 U
2-Methylnaphthalene	mg/kg	0.035 J	0.3 U	0.013 J	0.3 U	0.29 U	0.3 U	0.29 U	0.29 U	0.28 U	0.28 U	0.016 J	0.3 U	0.088 J	0.0042 J	0.3 U	0.27 U	5.7 U
2-Methylphenol	mg/kg	1.4 U	0.3 U	0.3 U	0.3 U	0.29 U	0.3 U	0.29 U	0.29 U	0.28 U	0.28 U	0.3 U	0.3 U	5.6 U	0.28 U	0.3 U	0.27 U	5.7 U
2-Nitroaniline	mg/kg	1 U	0.23 U	0.23 U	0.23 U	0.22 U	0.23 U	0.22 U	0.22 U	0.21 U	0.21 U	0.23 U	0.22 U	4.3 U	0.21 U	0.23 U	0.21 U	4.3 U
2-Nitrophenol	mg/kg	1.4 U	0.3 U	0.3 U	0.3 U	0.29 U	0.3 U	0.29 U	0.29 U	0.28 U	0.28 U	0.3 U	0.3 U	5.6 U	0.28 U	0.3 U	0.27 U	5.7 U
3&4-Methylphenol	mg/kg	1.4 U	0.3 U	0.3 U	0.3 U	0.29 U	0.3 U	0.29 U	0.29 U	0.28 U	0.28 U	0.3 U	0.3 U	5.6 U	0.28 U	0.3 U	0.27 U	5.7 U
3,3'-Dichlorobenzidine	mg/kg	8.2 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	1.7 U	1.7 U	1.7 U	1.7 U	1.8 U	1.8 U	34 U	1.7 U	1.8 U	1.7 U	34 U
3-Nitroaniline	mg/kg	1 U	0.23 U	0.23 U	0.23 U	0.22 U	0.23 U	0.22 U	0.22 U	0.21 U	0.21 U	0.23 U	0.22 U	4.3 U	0.21 U	0.23 U	0.21 U	4.3 U
4,6-Dinitro-2-methylphenol	mg/kg	0.77 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.16 U	0.16 U	0.16 U	0.16 U	0.17 U	0.17 U	3.2 U	0.16 U	0.17 U	0.15 U	3.2 U
4-Bromophenyl phenyl ether	mg/kg	1.4 U	0.3 U	0.3 U	0.3 U	0.29 U	0.3 U	0.29 U	0.29 U	0.28 U	0.28 U	0.3 U	0.3 U	5.6 U	0.28 U	0.3 U	0.27 U	5.7 U
4-Chloro-3-methylphenol	mg/kg	1.4 U	0.3 U	0.3 U	0.3 U	0.29 U	0.3 U	0.29 U	0.29 U	0.28 U	0.28 U	0.3 U	0.3 U	5.6 U	0.28 U	0.3 U	0.27 U	5.7 U
4-Chloroaniline	mg/kg	1 U	0.23 U	0.23 U	0.23 U	0.22 U	0.23 U	0.22 U	0.22 U	0.21 U	0.21 U	0.23 U	0.22 U	4.3 U	0.21 U	0.23 U	0.21 U	4.3 U
4-Chlorophenyl phenyl ether	mg/kg	1.4 U	0.3 U	0.3 U	0.3 U	0.29 U	0.3 U	0.29 U	0.29 U	0.28 U	0.28 U	0.3 U	0.3 U	5.6 U	0.28 U	0.3 U	0.27 U	5.7 U
4-Nitroaniline	mg/kg	1 U	0.23 U	0.23 U	0.23 U	0.22 U	0.23 U	0.22 U	0.22 U	0.21 U	0.21 U	0.23 U	0.22 U	4.3 U	0.21 U	0.23 U	0.21 U	4.3 U
4-Nitrophenol	mg/kg	1.7 U	0.38 U	0.37 U	0.38 U	0.37 U	0.38 U	0.36 U	0.36 U	0.35 U	0.35 U	0.38 U	0.37 U	7.1 U	0.35 U	0.37 U	0.34 U	7.1 U
Acenaphthene	mg/kg	1.4 U	0.3 U	0.3 U	0.3 U	0.025 J	0.3 U	0.29 U	0.29 U	0.28 U	0.28 U	0.017 J	0.3 U	0.14 J	0.28 U	0.3 U	0.27 U	5.7 U
Acenaphthylene	mg/kg	1.4 U	0.3 U	0.3 U	0.3 U	0.29 U	0.3 U	0.29 U	0.29 U	0.28 U	0.28 U	0.03 J	0.3 U	5.6 U	0.28 U	0.3 U	0.27 U	5.7 U
Acetophenone	mg/kg	1.4 U	0.3 U	0.3 U	0.3 U	0.29 U	0.3 U	0.29 U	0.29 U	0.28 U	0.28 U	0.3 U	0.3 U	5.6 U	0.28 U	0.3 U	0.27 U	5.7 U
Anthracene	mg/kg	1.4 U	0.3 U	0.3 U	0.3 U	0.013 J	0.3 U	0.29 U	0.29 U	0.28 U	0.28 U	0.052 J	0.3 U	0.35 J	0.28 U	0.3 U	0.27 U	5.7 U
Atrazine	mg/kg	0.21 U	0.046 U	0.045 U	0.045 U	0.044 U	0.046 U	0.044 U	0.044 U	0.043 U	0.043 U	0.046 U	0.045 U	0.85 U	0.042 U	0.045 U	0.041 U	0.86 U
Benzaldehyde	mg/kg	R	0.3 U	0.3 U	0.3 U	0.29 U	0.3 U	0.29 U	0.29 U	0.28 U	0.28 U	0.3 U	0.3 U	5.6 U	0.28 U	0.017 J	0.27 U	5.7 U
Benzo(a)anthracene	mg/kg	1.4 U	0.3 U	0.3 U	0.3 U	0.068 J	0.3 U	0.29 U	0.29 U	0.28 U	0.28 U	0.19 J	0.3 U	1.1 J	0.011 J	0.3 U	0.27 U	5.7 U
Benzo(a)pyrene	mg/kg	1.4 U	0.3 U	0.0056 J	0.3 U	0.064 J	0.3 U	0.29 U	0.29 U	0.28 U	0.28 U	0.17 J	0.3 U	1.1 J	0.0099 J	0.3 U	0.27 U	0.39 J
Benzo(b)fluoranthene	mg/kg	1.4 U	0.3 U	0.0093 J	0.3 U	0.091 J	0.3 U	0.29 U	0.29 U	0.28 U	0.28 U	0.26 J	0.3 U	1.6 J	0.28 U	0.0075 J	0.27 U	0.36 J
Benzo(g,h,i)perylene	mg/kg	1.4 U	0.3 U	0.3 U	0.3 U	0.055 J	0.3 U	0.29 U	0.29 U	0.28 U	0.28 U	0.12 J	0.3 U	0.9 J	0.015 J	0.3 U	0.0042 J	0.26 J
Benzo(k)fluoranthene	mg/kg	1.4 U	0.3 U	0.3 U	0.3 U	0.042 J	0.3 U	0.29 U	0.29 U	0.28 U	0.28 U	0.12 J	0.3 U	0.7 J	0.28 U	0.3 U	0.27 U	5.7 U
Biphenyl (1,1-Biphenyl)	mg/kg	1.4 U	0.3 U	0.3 U	0.3 U	0.29 U	0.3 U	0.29 U	0.29 U	0.28 U	0.28 U	0.3 U	0.3 U	5.6 U	0.28 U	0.3 U	0.27 U	5.7 U
bis(2-Chloroethoxy)methane	mg/kg	1.4 U	0.3 U	0.3 U	0.3 U	0.29 U	0.3 U	0.29 U	0.29 U	0.28 U	0.28 U	0.3 U	0.3 U	5.6 U	0.28 U	0.3 U	0.27 U	5.7 U
bis(2-Chloroethyl)ether	mg/kg	0.41 U	0.092 U	0.09 U	0.091 U	0.089 U	0.092 U	0.087 U	0.087 U	0.085 U	0.085 U	0.091 U	0.089 U	1.7 U	0.084 U	0.091 U	0.083 U	1.7 U
bis(2-Ethylhexyl)phthalate (DEHP)	mg/kg	1.4 U	0.033 J	0.3 U	0.3 U	0.078 J	0.3 U	0.041 J	0.29 U	0.034 J	0.041 J	0.3 U	0.3 U	5.6 U	0.14 J	0.3 U	0.27 U	5.7 U

TABLE 3.8

PART 201 CRITERIA EXCEEDANCES - SOIL
2013 RFI REPORT
FORMER GENERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation		*EAST01*	*EAST01*	*EAST01*	*EAST01*	*EAST01*	*EAST01*	*EAST01*	*EAST01*	*EAST01*	*EAST01*	*EAST01*	*EAST01*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*
Perimeter Status (1)		*N*	*N*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*N*	*N*	*N*	*N*	*N*
Sample Location		*CRA-824SB*	*CRA-824SB*	*CRA-702SB*	*CRA-702SB*	*CRA-772SB*	*CRA-826ML*	*CRA-828M*	*CRA-828M*	*CRA-829M*	*CRA-829M*	*CRA-836SB*	*CRA-836SB*	*CRA-756M*	*CRA-756M*	*CRA-757M*	*CRA-757M*	*CRA-758SB*
Sample Identification (SO-17358-)		*030712-CB-147*	*030712-CB-148*	*022112-DR-039*	*022112-DR-040*	*031412-CB-195*	*031412-CB-196*	*011712-DR-003*	*011712-DR-004*	*011712-DR-001*	*011712-DR-002*	*031512-DR-074*	*031512-DR-075*	*030212-CB-117*	*030212-CB-118*	*030512-CB-119*	*030512-CB-120*	*030112-CB-111*
Sample Date		*3/7/2012*	*3/7/2012*	*2/21/2012*	*2/21/2012*	*3/14/2012*	*3/14/2012*	*1/17/2012*	*1/17/2012*	*1/17/2012*	*1/17/2012*	*3/15/2012*	*3/15/2012*	*3/2/2012*	*3/2/2012*	*3/5/2012*	*3/5/2012*	*3/1/2012*
Sample Depth		*(1-3) ft BGS*	*(3.5-5.5) ft BGS*	*(1-2) ft BGS*	*(2-4) ft BGS*	*(1.5-3.5) ft BGS*	*(1-3) ft BGS*	*(0-2) ft BGS*	*(2-4) ft BGS*	*(0-2) ft BGS*	*(2.5-4.5) ft BGS*	*(0-2) ft BGS*	*(4-6) ft BGS*	*(0.5-2.5) ft BGS*	*(5-7) ft BGS*	*(1-3) ft BGS*	*(5-7) ft BGS*	*(0.5-2.5) ft BGS*
Sample Type																		
	Units																	
SVOCs Continued																		
Butyl benzylphthalate (BBP)	mg/kg	1.4 U	0.3 U	0.3 U	0.3 U	0.29 U	0.3 U	0.29 U	0.29 U	0.28 U	0.28 U	0.3 U	0.3 U	5.6 U	0.28 U	0.3 U	0.27 U	5.7 U
Caprolactam	mg/kg	1.4 U	0.3 U	0.3 U	0.3 U	0.29 U	0.3 U	0.29 U	0.29 U	0.28 U	0.28 U	0.3 U	0.3 U	5.6 U	0.28 U	0.3 U	0.27 U	5.7 U
Carbazole	mg/kg	1.4 U	0.3 U	0.3 U	0.3 U	0.29 U	0.3 U	0.29 U	0.29 U	0.28 U	0.28 U	0.033 J	0.3 U	5.6 U	0.28 U	0.3 U	0.27 U	5.7 U
Chrysene	mg/kg	1.4 U	0.3 U	0.3 U	0.3 U	0.083 J	0.3 U	0.29 U	0.29 U	0.28 U	0.28 U	0.21 J	0.3 U	1.2 J	0.018 J	0.3 U	0.0069 J	0.34 J
Dibenz(a,h)anthracene	mg/kg	1.4 U	0.3 U	0.3 U	0.3 U	0.29 U	0.3 U	0.29 U	0.29 U	0.28 U	0.28 U	0.3 U	0.3 U	5.6 U	0.28 U	0.3 U	0.27 U	5.7 U
Dibenzofuran	mg/kg	1.4 U	0.3 U	0.3 U	0.3 U	0.29 U	0.3 U	0.29 U	0.29 U	0.28 U	0.28 U	0.012 J	0.3 U	0.1 J	0.28 U	0.3 U	0.27 U	5.7 U
Diethyl phthalate	mg/kg	1.4 U	0.3 U	0.3 U	0.3 U	0.29 U	0.3 U	0.29 U	0.29 U	0.28 U	0.28 U	0.3 U	0.3 U	5.6 U	0.28 U	0.3 U	0.27 U	5.7 U
Dimethyl phthalate	mg/kg	1.4 U	0.3 U	0.3 U	0.3 U	0.29 U	0.3 U	0.29 U	0.29 U	0.28 U	0.28 U	0.3 U	0.3 U	5.6 U	0.28 U	0.3 U	0.27 U	5.7 U
Di-n-butylphthalate (DBP)	mg/kg	1.4 U	0.3 U	0.3 U	0.3 U	0.29 U	0.3 U	0.29 U	0.29 U	0.28 U	0.28 U	0.3 U	0.3 U	5.6 U	0.28 U	0.3 U	0.27 U	5.7 U
Di-n-octyl phthalate (DnOP)	mg/kg	1.4 U	0.3 U	0.3 U	0.3 U	0.29 U	0.3 U	0.29 U	0.29 U	0.28 U	0.28 U	0.3 U	0.3 U	5.6 U	0.28 U	0.3 U	0.27 U	5.7 U
Fluoranthene	mg/kg	0.2 J	0.3 U	0.0053 J	0.3 U	0.2 J	0.3 U	0.29 U	0.29 U	0.28 U	0.28 U	0.51	0.3 U	2.2 J	0.021 J	0.0078 J	0.004 J	0.38 J
Fluorene	mg/kg	0.062 J	0.3 U	0.3 U	0.3 U	0.027 J	0.015 J	0.29 U	0.29 U	0.28 U	0.28 U	0.022 J	0.3 U	0.17 J	0.28 U	0.3 U	0.27 U	5.7 U
Hexachlorobenzene	mg/kg	1.4 U	0.3 U	0.3 U	0.3 U	0.29 U	0.3 U	0.29 U	0.29 U	0.28 U	0.28 U	0.3 U	0.3 U	5.6 U	0.28 U	0.3 U	0.27 U	5.7 U
Hexachlorobutadiene	mg/kg	0.21 U	0.046 U	0.045 U	0.045 U	0.044 U	0.046 U	0.044 U	0.044 U	0.043 U	0.043 U	0.046 U	0.045 U	0.85 U	0.042 U	0.045 U	0.041 U	0.86 U
Hexachlorocyclopentadiene	mg/kg	1.4 U	0.3 U	0.3 U	0.3 U	0.29 U	0.3 U	0.29 U	0.29 U	0.28 U	0.28 U	0.3 U	0.3 U	5.6 U	0.28 U	0.3 U	0.27 U	5.7 U
Hexachloroethane	mg/kg	1.4 U	0.3 U	0.3 U	0.3 U	0.29 U	0.3 U	0.29 U	0.29 U	0.28 U	0.28 U	0.3 U	0.3 U	5.6 U	0.28 U	0.3 U	0.27 U	5.7 U
Indeno(1,2,3-cd)pyrene	mg/kg	1.4 U	0.3 U	0.3 U	0.3 U	0.046 J	0.3 U	0.29 U	0.29 U	0.28 U	0.28 U	0.097 J	0.3 U	0.73 J	0.0065 J	0.3 U	0.27 U	0.22 J
Isophorone	mg/kg	1.4 U	0.3 U	0.3 U	0.3 U	0.29 U	0.3 U	0.29 U	0.29 U	0.28 U	0.28 U	0.3 U	0.3 U	5.6 U	0.28 U	0.3 U	0.27 U	5.7 U
Naphthalene	mg/kg	1.4 U	0.024 J	0.3 U	0.3 U	0.29 U	0.3 U	0.29 U	0.29 U	0.28 U	0.28 U	0.016 J	0.3 U	5.6 U	0.28 U	0.3 U	0.27 U	5.7 U
Nitrobenzene	mg/kg	1.4 U	0.3 U	0.3 U	0.3 U	0.29 U	0.3 U	0.29 U	0.29 U	0.28 U	0.28 U	0.3 U	0.3 U	5.6 U	0.28 U	0.3 U	0.27 U	5.7 U
N-Nitrosodi-n-propylamine	mg/kg	1.4 U	0.3 U	0.3 U	0.3 U	0.29 U	0.3 U	0.29 U	0.29 U	0.28 U	0.28 U	0.3 U	0.3 U	5.6 U	0.28 U	0.3 U	0.27 U	5.7 U
N-Nitrosodiphenylamine	mg/kg	1.4 U	0.3 U	0.3 U	0.3 U	0.29 U	0.3 U	0.29 U	0.29 U	0.28 U	0.28 U	0.3 U	0.3 U	5.6 U	0.28 U	0.3 U	0.27 U	5.7 U
Pentachlorophenol	mg/kg	0.77 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.16 U	0.16 U	0.16 U	0.16 U	0.17 U	0.17 U	3.2 U	0.16 U	0.17 U	0.15 U	3.2 U
Phenanthrene	mg/kg	0.24 J	0.3 U	0.0092 J	0.3 U	0.14 J	0.0057 J	0.29 U	0.29 U	0.28 U	0.28 U	0.27 J	0.3 U	1.3 J	0.022 J	0.0063 J	0.0046 J	5.7 U
Phenol	mg/kg	1.4 U	0.3 U	0.3 U	0.3 U	0.29 U	0.3 U	0.29 U	0.29 U	0.28 U	0.28 U	0.3 U	0.3 U	5.6 U	0.28 U	0.3 U	0.27 U	5.7 U
Pyrene	mg/kg	0.19 J	0.3 U	0.0079 J	0.3 U	0.15 J	0.3 U	0.29 U	0.29 U	0.28 U	0.28 U	0.41	0.3 U	1.9 J	0.023 J	0.0063 J	0.0058 J	0.64 J
Metals																		
Aluminum	mg/kg	1500	4200	4500	**10000**[bc]	2400	4300	4500	2100	1900	3100	5000	1700	4400	2000	4800	1900	3400
Antimony	mg/kg	0.15 UJ	0.15 UJ	0.066 J	0.065 J	0.056 J	0.11 J	0.038 J	0.056 J	0.039 J	0.084 J	0.14 J	0.074 J	0.39 J	0.062 J	0.042 J	0.075 J	0.035 J
Arsenic	mg/kg	2.6	2.2	4.2	2.6	1.9	**6.5**[bcd]	3.8	2.9	3.5	3.4	4.7	3.6	5.6	1.9	2.5	1.7	2.4
Barium	mg/kg	11	16	38	43	6.5	14	17	8.1	7.3	11	46	7.3	47	10	23	7.7	20
Beryllium	mg/kg	0.066 J	0.11 J	0.2	0.2	0.16 U	0.15 J	0.047 J	0.17 U	0.13 U	0.15 U	0.41	0.16 U	0.26	0.15	0.19	0.048 J	0.13 J
Cadmium	mg/kg	0.13	0.076	0.092	0.086 U	0.087	0.09 U	0.075 U	0.086 U	0.068	0.075	0.17	0.081 U	0.5	0.093	0.21	0.13	0.16
Calcium	mg/kg	-	-	110000	3000	-	-	-	-	-	-	-	-	-	-	-	-	-
Chromium	mg/kg	3.8	9.6	7.9	16	5.7	11	10	4.6	4.2	8.5	18	5	11	7.9	9.4	5.4	9.3
Chromium III (trivalent)	mg/kg	-	-	-	-	-	11	9.5	3.9	4.2	8.1	-	-	-	-	9.1	5.4	-
Chromium VI (hexavalent)	mg/kg	-	-	-	-	-	0.92 U	0.74 J	0.65 J	0.85 U	0.35 J	-	-	-	-	0.38 J	0.82 U	-
Cobalt	mg/kg	1.6	2.6	3.2	3.6	2.4	3.9	3.2	3.4	1.7	3.9	3.2	2.6	2.6	2.2	2.8	3.5	2.8
Copper	mg/kg	5.8 J	3.5 J	8.9	12	8.5	9.7	8.8	13	5.8	15	13	5.4	92 J	7.2 J	6.8	5.9	15 J
Iron	mg/kg	3900	7500	7600	11000	4900	**16000**[bc]	9100	7500	5200	8100	12000	5400	7500	5200	7800	4000	6600
Lead	mg/kg	2.3	3.9	5.6	7.2	3.7	5.5	4.1	3.1	2.4	4.5	13	3.1	42	3.4	5.6	2.6	7.7
Lead - coarse fraction	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lead - fine fraction	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lead - total (calculated by fine/coarse fraction)	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Magnesium	mg/kg	-	-	**51000**[bc]	2100	-	-	-	-	-	-	-	-	-	-	-	-	-

TABLE 3.8

PART 201 CRITERIA EXCEEDANCES - SOIL
2013 RFI REPORT
FORMER GENERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation		*EAST01*	*EAST01*	*EAST01*	*EAST01*	*EAST01*	*EAST01*	*EAST01*	*EAST01*	*EAST01*	*EAST01*	*EAST01*	*EAST01*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*
Perimeter Status (1)		*N*	*N*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*N*	*N*	*N*	*N*	*N*
Sample Location		*CRA-824SB*	*CRA-824SB*	*CRA-702SB*	*CRA-702SB*	*CRA-772SB*	*CRA-826ML*	*CRA-828M*	*CRA-828M*	*CRA-829M*	*CRA-829M*	*CRA-836SB*	*CRA-836SB*	*CRA-756M*	*CRA-756M*	*CRA-757M*	*CRA-757M*	*CRA-758SB*
Sample Identification (SO-17358-)		*030712-CB-147*	*030712-CB-148*	*022112-DR-039*	*022112-DR-040*	*031412-CB-195*	*031412-CB-196*	*011712-DR-003*	*011712-DR-004*	*011712-DR-001*	*011712-DR-002*	*031512-DR-074*	*031512-DR-075*	*030212-CB-117*	*030212-CB-118*	*030512-CB-119*	*030512-CB-120*	*030112-CB-111*
Sample Date		*3/7/2012*	*3/7/2012*	*2/21/2012*	*2/21/2012*	*3/14/2012*	*3/14/2012*	*1/17/2012*	*1/17/2012*	*1/17/2012*	*1/17/2012*	*3/15/2012*	*3/15/2012*	*3/2/2012*	*3/2/2012*	*3/5/2012*	*3/5/2012*	*3/1/2012*
Sample Depth		*(1-3) ft BGS*	*(3.5-5.5) ft BGS*	*(1-2) ft BGS*	*(2-4) ft BGS*	*(1.5-3.5) ft BGS*	*(1-3) ft BGS*	*(0-2) ft BGS*	*(2-4) ft BGS*	*(0-2) ft BGS*	*(2.5-4.5) ft BGS*	*(0-2) ft BGS*	*(4-6) ft BGS*	*(0.5-2.5) ft BGS*	*(5-7) ft BGS*	*(1-3) ft BGS*	*(5-7) ft BGS*	*(0.5-2.5) ft BGS*
Sample Type																		
	Units																	
Metals Continued																		
Manganese	mg/kg	120	53	380	53	72	210	66 J	170 J	200 J	210 J	440	150	280	170	110	110	230
Mercury	mg/kg	0.042 U	0.043 U	0.031 J	0.083	0.044	0.047 U	0.027 J	0.026 J	0.04 U	0.02 J	0.042 U	0.041 U	0.043 U	0.042 U	0.026 J	0.042 U	0.019 J
Nickel	mg/kg	4.3	6	9.7	14	7.1	10	9	6.6	5	13	9.4	6.9	8.2	6.9	7.3	8.7	6.2
Potassium	mg/kg	-	-	610	780	-	-	-	-	-	-	-	-	-	-	-	-	-
Selenium	mg/kg	0.23	0.35	0.28	**0.49**[d]	0.39 J	**0.52 J**[d]	**0.71**[d]	0.35	0.34	**0.7**[d]	0.36 J	0.19 J	0.33	0.26	**0.42**[d]	0.29	0.2
Silver	mg/kg	0.074 U	0.075 U	0.023 J	0.017 J	0.078 U	0.09 U	0.075 U	0.086 U	0.067 U	0.074 U	0.03 J	0.081 U	0.084	0.067 U	0.017 J	0.077 U	0.084 U
Sodium	mg/kg	-	-	460	800	-	-	-	-	-	-	-	-	-	-	-	-	-
Thallium	mg/kg	0.036 J	0.092	0.15	0.11	0.13	0.12	0.075 U	0.24	0.11	0.14	0.093	0.085 U	0.084 U	0.081 U	0.065 J	0.07 J	0.092 U
Vanadium	mg/kg	6.1	12	12	18	8.5	20	13	12	6.8	9.8	12	6.1	9	6.9	14	7.2	11
Zinc	mg/kg	16	27	16	32	14	23	19	18	12	27	27	13	68	16	23	16	23
Polychlorinated biphenyls (PCBs)																		
Aroclor-1016 (PCB-1016)	mg/kg	0.034 U	0.038 U	0.037 U	0.038 U	0.037 U	0.038 U	0.036 U	0.036 U	0.035 U	0.035 U	0.038 U	0.037 U	0.035 U	0.035 U	0.037 U	0.034 U	0.035 U
Aroclor-1221 (PCB-1221)	mg/kg	0.034 U	0.038 U	0.037 U	0.038 U	0.037 U	0.038 U	0.036 U	0.036 U	0.035 U	0.035 U	0.038 U	0.037 U	0.035 U	0.035 U	0.037 U	0.034 U	0.035 U
Aroclor-1232 (PCB-1232)	mg/kg	0.034 U	0.038 U	0.037 U	0.038 U	0.037 U	0.038 U	0.036 U	0.036 U	0.035 U	0.035 U	0.038 U	0.037 U	0.035 U	0.035 U	0.037 U	0.034 U	0.035 U
Aroclor-1242 (PCB-1242)	mg/kg	0.034 U	0.038 U	0.033 J	0.038 U	0.037 U	0.038 U	0.036 U	0.036 U	0.035 U	0.035 U	0.038 U	0.037 U	0.035 U	0.035 U	0.037 U	0.034 U	0.035 U
Aroclor-1248 (PCB-1248)	mg/kg	0.034 U	0.038 U	0.037 U	0.038 U	0.037 U	0.038 U	0.036 U	0.036 U	0.035 U	0.035 U	0.038 U	0.037 U	0.035 U	0.035 U	0.037 U	0.034 U	0.035 U
Aroclor-1254 (PCB-1254)	mg/kg	0.034 U	0.038 U	0.037 U	0.038 U	0.037 U	0.038 U	0.036 U	0.036 U	0.035 U	0.035 U	0.038 U	0.037 U	0.035 U	0.035 U	0.037 U	0.034 U	0.035 U
Aroclor-1260 (PCB-1260)	mg/kg	0.034 U	0.038 U	0.037 U	0.038 U	0.037 U	0.038 U	0.036 U	0.036 U	0.035 U	0.035 U	0.022 J	0.037 U	0.097	0.035 U	0.037 U	0.034 U	0.035 U
Aroclor-1262 (PCB-1262)	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Aroclor-1268 (PCB-1268)	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total PCBs	mg/kg	ND	ND	0.033 J	ND	ND	ND	ND	ND	ND	ND	0.022 J	ND	0.097	ND	ND	ND	ND

Notes

Michigan Part 201 generic clean up criteria (updated September 28, 2012)

ID - Insufficient data to develop criterion

NLV - Hazardous substance is not likely to volatilize under most conditions

NA - Criterion or value is not available

Perimeter Status (1) - N - non-perimeter, Y - perimeter

mg/kg - milligram/kilogram

Notes:

U - Not detected at the associated reporting limit.

J - Estimated concentration.

UJ - Not detected; associated reporting limit is estimated.

R - Rejected

TABLE 3.8

PART 201 CRITERIA EXCEEDANCES - SOIL
2013 RFI REPORT
FORMER GENERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation		*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*
Perimeter Status (1)		*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*
Sample Location		*CRA-758SB*	*CRA-759SB*	*CRA-759SB*	*CRA-760SB*	*CRA-760SB*	*CRA-762SB*	*CRA-762SB*	*CRA-763SB*	*CRA-763SB*	*CRA-763SB*	*CRA-764SB*	*CRA-764SB*	*CRA-765SB*	*CRA-765SB*	*CRA-766SB*	*CRA-766SB*	*CRA-768SB*	*CRA-768SB*	*CRA-822SB*
Sample Identification (SO-17358-)		*030112-CB-112*	*030712-CB-157*	*030712-CB-158*	*030712-CB-155*	*030712-CB-156*	*030112-CB-107*	*030112-CB-108*	*032612-CB-255*	*032612-CB-256*	*030112-CB-103*	*030112-CB-104*	*030112-CB-105*	*030112-CB-106*	*031412-CB-197*	*031412-CB-198*	*030712-CB-151*	*030712-CB-152*	*030112-CB-109*
Sample Date		*3/1/2012*	*3/7/2012*	*3/7/2012*	*3/7/2012*	*3/7/2012*	*3/1/2012*	*3/1/2012*	*3/26/2012*	*3/26/2012*	*3/1/2012*	*3/1/2012*	*3/1/2012*	*3/1/2012*	*3/14/2012*	*3/14/2012*	*3/7/2012*	*3/7/2012*	*3/1/2012*
Sample Depth		*(6-8) ft BGS*	*(1-3) ft BGS*	*(5-7) ft BGS*	*(1-3) ft BGS*	*(5-7) ft BGS*	*(1-3) ft BGS*	*(3-5) ft BGS*	*(1-3) ft BGS*	*(4-6) ft BGS*	*(1-3) ft BGS*	*(3-5) ft BGS*	*(1-3) ft BGS*	*(4-6) ft BGS*	*(0.5-2.5) ft BGS*	*(3-5) ft BGS*	*(1-3) ft BGS*	*(4-6) ft BGS*	*(1-3) ft BGS*
Sample Type																			
	Units																		
Volatile Organic Compounds (VOCs)																			
1,1,1-Trichloroethane	mg/kg	0.044 U	0.043 U	0.038 U	0.045 U	0.045 U	0.041 U	0.041 U	0.04 U	0.055 U	0.044 U	0.044 U	0.044 U	0.043 U	0.04 U	0.043 U	0.043 U	0.043 U	0.039 U
1,1,2,2-Tetrachloroethane	mg/kg	0.044 U	0.043 U	0.038 U	0.045 U	0.045 U	0.041 U	0.041 U	0.04 U	0.055 U	0.044 U	0.044 U	0.044 U	0.043 U	0.04 U	0.043 U	0.043 U	0.043 U	0.039 U
1,1,2-Trichloroethane	mg/kg	0.044 U	0.043 U	0.038 U	0.045 U	0.045 U	0.041 U	0.041 U	0.04 U	0.055 U	0.044 U	0.044 U	0.044 U	0.043 U	0.04 U	0.043 U	0.043 U	0.043 U	0.039 U
1,1-Dichloroethane	mg/kg	0.044 U	0.043 U	0.038 U	0.045 U	0.045 U	0.041 U	0.041 U	0.04 U	0.055 U	0.044 U	0.044 U	0.044 U	0.043 U	0.04 U	0.043 U	0.043 U	0.043 U	0.039 U
1,1-Dichloroethene	mg/kg	0.044 U	0.043 U	0.038 U	0.045 U	0.045 U	0.041 U	0.041 U	0.04 U	0.055 U	0.044 U	0.044 U	0.044 U	0.043 U	0.04 U	0.043 U	0.043 U	0.043 U	0.039 U
1,2,4-Trichlorobenzene	mg/kg	0.22 U	0.21 U	0.19 U	0.22 U	0.23 U	0.21 U	0.21 U	0.2 U	0.28 U	0.22 U	0.22 U	0.22 U	0.21 U	0.2 U	0.22 U	0.22 U	0.22 U	0.2 U
1,2-Dibromo-3-chloropropane (DBCP)	mg/kg	0.22 U	0.21 U	0.19 U	0.22 U	0.23 U	0.21 U	0.21 U	0.2 U	0.28 U	0.22 U	0.22 U	0.22 U	0.21 U	0.2 U	0.22 U	0.22 U	0.22 U	0.2 U
1,2-Dibromoethane (Ethylene dibromide)	mg/kg	0.22 U	0.21 U	0.19 U	0.22 U	0.23 U	0.21 U	0.21 U	0.2 U	0.28 U	0.22 U	0.22 U	0.22 U	0.21 U	0.2 U	0.22 U	0.22 U	0.22 U	0.2 U
1,2-Dichlorobenzene	mg/kg	0.089 U	0.085 U	0.02 J	0.09 U	0.091 U	0.082 U	0.083 U	0.08 U	0.11 U	0.089 U	0.089 U	0.088 U	0.086 U	0.079 U	0.087 U	0.087 U	0.087 U	0.079 U
1,2-Dichloroethane	mg/kg	0.044 U	0.043 U	0.038 U	0.045 U	0.045 U	0.041 U	0.041 U	0.04 U	0.055 U	0.044 U	0.044 U	0.044 U	0.043 U	0.04 U	0.043 U	0.043 U	0.043 U	0.039 U
1,2-Dichloropropane	mg/kg	0.044 U	0.043 U	0.038 U	0.045 U	0.045 U	0.041 U	0.041 U	0.04 U	0.055 U	0.044 U	0.044 U	0.044 U	0.043 U	0.04 U	0.043 U	0.043 U	0.043 U	0.039 U
1,3-Dichlorobenzene	mg/kg	0.089 U	0.085 U	0.077 U	0.09 U	0.091 U	0.082 U	0.083 U	0.08 U	0.11 U	0.089 U	0.089 U	0.088 U	0.086 U	0.079 U	0.087 U	0.087 U	0.087 U	0.079 U
1,4-Dichlorobenzene	mg/kg	0.089 U	0.085 U	0.0084 J	0.09 U	0.091 U	0.082 U	0.083 U	0.08 U	0.11 U	0.089 U	0.089 U	0.088 U	0.086 U	0.079 U	0.087 U	0.087 U	0.087 U	0.079 U
2-Butanone (Methyl ethyl ketone) (MEK)	mg/kg	0.66 U	0.64 U	0.58 U	0.67 U	0.68 U	0.62 U	0.62 U	0.6 U	0.83 U	0.66 U	0.66 U	0.66 U	0.64 U	0.6 U	0.65 U	0.65 U	0.65 U	0.59 U
2-Hexanone	mg/kg	2.2 U	2.1 U	1.9 U	2.2 U	2.3 U	2.1 U	2.1 U	2 U	2.8 U	2.2 U	2.2 U	2.2 U	2.1 U	2 U	2.2 U	2.2 U	2.2 U	2 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	mg/kg	2.2 U	2.1 U	1.9 U	2.2 U	2.3 U	2.1 U	2.1 U	2 U	2.8 U	2.2 U	2.2 U	2.2 U	2.1 U	2 U	2.2 U	2.2 U	2.2 U	2 U
Acetone	mg/kg	0.66 U	0.64 U	0.27 J	0.67 U	0.68 U	0.62 U	0.62 U	0.6 U	0.83 U	0.66 U	0.66 U	0.66 U	0.64 U	0.6 U	0.65 U	0.65 U	0.65 U	0.59 U
Benzene	mg/kg	0.044 U	0.043 U	0.038 U	0.045 U	0.045 U	0.041 U	0.041 U	0.04 U	0.055 U	0.044 U	0.044 U	0.044 U	0.043 U	0.04 U	0.043 U	0.043 U	0.043 U	0.039 U
Bromodichloromethane	mg/kg	0.089 U	0.085 U	0.077 U	0.09 U	0.091 U	0.082 U	0.083 U	0.08 U	0.11 U	0.089 U	0.089 U	0.088 U	0.086 U	0.079 U	0.087 U	0.087 U	0.087 U	0.079 U
Bromoform	mg/kg	0.089 U	0.085 U	0.077 U	0.09 U	0.091 U	0.082 U	0.083 U	0.08 U	0.11 U	0.089 U	0.089 U	0.088 U	0.086 U	0.079 U	0.087 U	0.087 U	0.087 U	0.079 U
Bromomethane (Methyl bromide)	mg/kg	0.22 U	0.21 U	0.19 U	0.22 U	0.23 U	0.21 U	0.21 U	0.2 U	0.28 U	0.22 U	0.22 U	0.22 U	0.21 U	0.2 U	0.22 U	0.22 U	0.22 U	0.2 U
Carbon disulfide	mg/kg	0.22 U	0.21 U	0.042 J	0.22 U	0.23 U	0.21 U	0.21 U	0.2 U	0.28 U	0.22 U	0.22 U	0.22 U	0.21 U	0.2 U	0.22 U	0.22 U	0.22 U	0.2 U
Carbon tetrachloride	mg/kg	0.044 U	0.043 U	0.038 U	0.045 U	0.045 U	0.041 U	0.041 U	0.04 U	0.055 U	0.044 U	0.044 U	0.044 U	0.043 U	0.04 U	0.043 U	0.043 U	0.043 U	0.039 U
Chlorobenzene	mg/kg	0.044 U	0.043 U	0.038 U	0.045 U	0.045 U	0.041 U	0.041 U	0.04 U	0.055 U	0.044 U	0.044 U	0.044 U	0.043 U	0.04 U	0.043 U	0.043 U	0.043 U	0.039 U
Chloroethane	mg/kg	0.22 U	0.21 U	0.19 U	0.22 U	0.23 U	0.21 U	0.21 U	0.2 U	0.28 U	0.22 U	0.22 U	0.22 U	0.21 U	0.2 U	0.22 U	0.22 U	0.22 U	0.2 U
Chloroform (Trichloromethane)	mg/kg	0.044 U	0.043 U	0.038 U	0.045 U	0.045 U	0.041 U	0.041 U	0.04 U	0.055 U	0.044 U	0.044 U	0.044 U	0.043 U	0.04 U	0.043 U	0.043 U	0.043 U	0.039 U
Chloromethane (Methyl chloride)	mg/kg	0.22 U	0.21 U	0.19 U	0.22 U	0.23 U	0.21 U	0.21 U	0.2 U	0.28 U	0.22 U	0.22 U	0.22 U	0.21 U	0.2 U	0.22 U	0.22 U	0.22 U	0.2 U
cis-1,2-Dichloroethene	mg/kg	0.044 U	0.043 U	0.038 U	0.045 U	0.045 U	0.041 U	0.041 U	0.04 U	0.055 U	0.044 U	0.044 U	0.044 U	0.043 U	0.04 U	0.043 U	0.043 U	0.043 U	0.039 U
cis-1,3-Dichloropropene	mg/kg	0.044 U	0.043 U	0.038 U	0.045 U	0.045 U	0.041 U	0.041 U	0.04 U	0.055 U	0.044 U	0.044 U	0.044 U	0.043 U	0.04 U	0.043 U	0.043 U	0.043 U	0.039 U
Cyclohexane	mg/kg	1.1 U	1 U	0.92 U	1.1 U	1.1 U	0.99 U	1 U	0.96 U	1.3 U	1.1 U	1.1 U	1.1 U	1 U	0.95 U	1 U	1 U	1 U	0.94 U
Dibromochloromethane	mg/kg	0.044 U	0.043 U	0.038 U	0.045 U	0.045 U	0.041 U	0.041 U	0.04 U	0.055 U	0.044 U	0.044 U	0.044 U	0.043 U	0.04 U	0.043 U	0.043 U	0.043 U	0.039 U
Dichlorodifluoromethane (CFC-12)	mg/kg	0.089 U	0.085 U	0.077 U	0.09 U	0.091 U	0.082 U	0.083 U	0.08 U	0.11 U	0.089 U	0.089 U	0.088 U	0.086 U	0.079 U	0.087 U	0.087 U	0.087 U	0.079 U
Ethylbenzene	mg/kg	0.044 U	0.043 U	0.011 J	0.045 U	0.045 U	0.041 U	0.041 U	0.04 U	0.055 U	0.044 U	0.044 U	0.044 U	0.043 U	0.04 U	0.043 U	0.043 U	0.043 U	0.039 U
Isopropyl benzene	mg/kg	0.22 U	0.21 U	0.19 U	0.22 U	0.23 U	0.21 U	0.21 U	0.2 U	0.28 U	0.22 U	0.22 U	0.22 U	0.21 U	0.2 U	0.22 U	0.22 U	0.011 J	0.2 U
Methyl acetate	mg/kg	1.1 U	1 U	0.21 J	1.1 U	1.1 U	0.99 U	1 U	0.96 U	1.3 U	1.1 U	1.1 U	1.1 U	1 U	0.95 U	1 U	0.067 J	1 U	0.94 U
Methyl cyclohexane	mg/kg	1.1 U	1 U	0.92 U	1.1 U	1.1 U	0.99 U	1 U	0.96 U	1.3 U	1.1 U	1.1 U	1.1 U	1 U	0.95 U	1 U	1 U	1 U	0.94 U
Methyl tert butyl ether (MTBE)	mg/kg	0.22 U	0.21 U	0.19 U	0.22 U	0.23 U	0.21 U	0.21 U	0.2 U	0.28 U	0.22 U	0.22 U	0.22 U	0.21 U	0.2 U	0.22 U	0.22 U	0.22 U	0.2 U
Methylene chloride	mg/kg	0.22 U	0.21 U	0.19 U	0.22 U	0.23 U	0.21 U	0.21 U	0.2 U	0.28 U	0.22 U	0.22 U	0.22 U	0.21 U	0.2 U	0.22 U	0.22 U	0.22 U	0.2 U
Styrene	mg/kg	0.044 U	0.043 U	0.038 U	0.045 U	0.045 U	0.041 U	0.041 U	0.04 U	0.055 U	0.044 U	0.044 U	0.044 U	0.043 U	0.04 U	0.043 U	0.043 U	0.043 U	0.039 U
Tetrachloroethene	mg/kg	0.024 J	0.043 U	0.026 J	0.045 U	0.045 U	0.041 U	0.041 U	0.04 U	0.026 J	0.044 U	0.044 U	0.02 J	0.043 U	0.04 U	0.043 U	0.043 U	0.043 U	0.039 U
Toluene	mg/kg	0.089 U	0.085 U	0.077 U	0.09 U	0.091 U	0.082 U	0.083 U	0.08 U	0.11 U	0.089 U	0.089 U	0.088 U	0.086 U	0.079 U	0.087 U	0.087 U	0.087 U	0.079 U
trans-1,2-Dichloroethene	mg/kg	0.044 U	0.043 U	0.038 U	0.045 U	0.045 U	0.041 U	0.041 U	0.04 U	0.055 U	0.044 U	0.044 U	0.044 U	0.043 U	0.04 U	0.043 U	0.043 U	0.043 U	0.039 U
trans-1,3-Dichloropropene	mg/kg	0.044 U	0.043 U	0.038 U	0.045 U	0.045 U	0.041 U	0.041 U	0.04 U	0.055 U	0.044 U	0.044 U	0.044 U	0.043 U	0.04 U	0.043 U	0.043 U	0.043 U	0.039 U
Trichloroethene	mg/kg	0.044 U	0.043 U	0.038 U	0.045 U	0.045 U	0.041 U	0.041 U	0.04 U	0.055 U	0.044 U	0.044 U	0.044 U	0.043 U	0.04 U	0.043 U	0.043 U	0.043 U	0.039 U

TABLE 3.8

PART 201 CRITERIA EXCEEDANCES - SOIL
2013 RFI REPORT
FORMER GENERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation		*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*
Perimeter Status (1)		*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*
Sample Location		*CRA-758SB*	*CRA-759SB*	*CRA-759SB*	*CRA-760SB*	*CRA-760SB*	*CRA-762SB*	*CRA-762SB*	*CRA-763SB*	*CRA-763SB*	*CRA-764SB*	*CRA-764SB*	*CRA-765SB*	*CRA-765SB*	*CRA-766SB*	*CRA-766SB*	*CRA-768SB*	*CRA-768SB*	*CRA-822SB*
Sample Identification (SO-17358-)		*030112-CB-112*	*030712-CB-157*	*030712-CB-158*	*030712-CB-155*	*030712-CB-156*	*030112-CB-107*	*030112-CB-108*	*032612-CB-255*	*032612-CB-256*	*030112-CB-103*	*030112-CB-104*	*030112-CB-105*	*030112-CB-106*	*031412-CB-197*	*031412-CB-198*	*030712-CB-151*	*030712-CB-152*	*030112-CB-109*
Sample Date		*3/1/2012*	*3/7/2012*	*3/7/2012*	*3/7/2012*	*3/7/2012*	*3/1/2012*	*3/1/2012*	*3/26/2012*	*3/26/2012*	*3/1/2012*	*3/1/2012*	*3/1/2012*	*3/1/2012*	*3/14/2012*	*3/14/2012*	*3/7/2012*	*3/7/2012*	*3/1/2012*
Sample Depth		*(6-8) ft BGS*	*(1-3) ft BGS*	*(5-7) ft BGS*	*(1-3) ft BGS*	*(5-7) ft BGS*	*(1-3) ft BGS*	*(3-5) ft BGS*	*(1-3) ft BGS*	*(4-6) ft BGS*	*(1-3) ft BGS*	*(3-5) ft BGS*	*(1-3) ft BGS*	*(4-6) ft BGS*	*(0.5-2.5) ft BGS*	*(3-5) ft BGS*	*(1-3) ft BGS*	*(4-6) ft BGS*	*(1-3) ft BGS*
Sample Type																			
	Units																		
VOCs Continued																			
Trichlorofluoromethane (CFC-11)	mg/kg	0.089 U	0.085 U	0.077 U	0.09 U	0.091 U	0.082 U	0.083 U	0.08 U	0.11 U	0.089 U	0.089 U	0.088 U	0.086 U	0.079 U	0.087 U	0.087 U	0.087 U	0.079 U
Trifluorotrichloroethane (Freon 113)	mg/kg	0.22 U	0.21 U	0.19 U	0.22 U	0.23 U	0.21 U	0.21 U	0.2 U	0.28 U	0.22 U	0.22 U	0.22 U	0.21 U	0.2 U	0.22 U	0.22 U	0.22 U	0.2 U
Vinyl chloride	mg/kg	0.035 U	0.034 U	0.031 U	0.036 U	0.036 U	0.033 U	0.033 U	0.032 U	0.044 U	0.035 U	0.035 U	0.035 U	0.034 U	0.032 U	0.035 U	0.035 U	0.035 U	0.031 U
Xylenes (total)	mg/kg	0.13 U	0.13 U	0.055 J	0.13 U	0.14 U	0.12 U	0.12 U	0.12 U	0.17 U	0.13 U	0.13 U	0.13 U	0.13 U	0.12 U	0.13 U	0.0094 J	0.13 U	0.12 U
Semi-Volatile Organic Compounds (SVOCs)																			
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	mg/kg	14 U	5.4 U	14 U	0.29 U	0.28 U	0.27 U	0.28 U	0.28 U	0.28 U	0.28 U	0.29 U	0.29 U	0.28 U	2.9 U	0.28 U	0.29 U	0.28 U	0.28 U
2,4,5-Trichlorophenol	mg/kg	14 U	5.4 U	14 U	0.29 U	0.28 U	0.27 U	0.28 U	0.28 U	0.28 U	0.28 U	0.29 U	0.29 U	0.28 U	2.9 U	0.28 U	0.29 U	0.28 U	0.28 U
2,4,6-Trichlorophenol	mg/kg	14 U	5.4 U	14 U	0.29 U	0.28 U	0.27 U	0.28 U	0.28 U	0.28 U	0.28 U	0.29 U	0.29 U	0.28 U	2.9 U	0.28 U	0.29 U	0.28 U	0.28 U
2,4-Dichlorophenol	mg/kg	14 U	5.4 U	14 U	0.29 U	0.28 U	0.27 U	0.28 U	0.28 U	0.28 U	0.28 U	0.29 U	0.29 U	0.28 U	2.9 U	0.28 U	0.29 U	0.28 U	0.28 U
2,4-Dimethylphenol	mg/kg	14 U	5.4 U	14 U	0.29 U	0.28 U	0.27 U	0.28 U	0.28 U	0.28 U	0.28 U	0.29 U	0.29 U	0.28 U	2.9 U	0.28 U	0.29 U	0.28 U	0.28 U
2,4-Dinitrophenol	mg/kg	7.8 U	3.1 U	7.8 U	0.17 U	R	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	1.6 U	0.16 U	0.16 U	0.16 U	0.16 U
2,4-Dinitrotoluene	mg/kg	14 U	5.4 U	14 U	0.29 U	0.28 U	0.27 U	0.28 U	0.28 U	0.28 U	0.28 U	0.29 U	0.29 U	0.28 U	2.9 U	0.28 U	0.29 U	0.28 U	0.28 U
2,6-Dinitrotoluene	mg/kg	14 U	5.4 U	14 U	0.29 U	0.28 U	0.27 U	0.28 U	0.28 U	0.28 U	0.28 U	0.29 U	0.29 U	0.28 U	2.9 U	0.28 U	0.29 U	0.28 U	0.28 U
2-Chloronaphthalene	mg/kg	14 U	5.4 U	14 U	0.29 U	0.28 U	0.27 U	0.28 U	0.28 U	0.28 U	0.28 U	0.29 U	0.29 U	0.28 U	2.9 U	0.28 U	0.29 U	0.28 U	0.28 U
2-Chlorophenol	mg/kg	14 U	5.4 U	14 U	0.29 U	0.28 U	0.27 U	0.28 U	0.28 U	0.28 U	0.28 U	0.29 U	0.29 U	0.28 U	2.9 U	0.28 U	0.29 U	0.28 U	0.28 U
2-Methylnaphthalene	mg/kg	14 U	0.37 J	1.6 J	0.0073 J	0.28 U	0.27 U	0.28 U	0.0069 J	0.0065 J	0.28 U	0.0038 J	0.29 U	0.28 U	2.9 U	0.048 J	0.0083 J	0.55	0.28 U
2-Methylphenol	mg/kg	14 U	5.4 U	14 U	0.29 U	0.28 U	0.27 U	0.28 U	0.28 U	0.28 U	0.28 U	0.29 U	0.29 U	0.28 U	2.9 U	0.28 U	0.29 U	0.28 U	0.28 U
2-Nitroaniline	mg/kg	10 U	4.1 U	10 U	0.22 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.22 U	0.22 U	0.22 U	2.2 U	0.21 U	0.22 U	0.21 U	0.21 U
2-Nitrophenol	mg/kg	14 U	5.4 U	14 U	0.29 U	0.28 U	0.27 U	0.28 U	0.28 U	0.28 U	0.28 U	0.29 U	0.29 U	0.28 U	2.9 U	0.28 U	0.29 U	0.28 U	0.28 U
3&4-Methylphenol	mg/kg	14 U	5.4 U	14 U	0.29 U	0.28 U	0.27 U	0.28 U	0.28 U	0.28 U	0.28 U	0.29 U	0.29 U	0.28 U	2.9 U	0.28 U	0.29 U	0.28 U	0.28 U
3,3'-Dichlorobenzidine	mg/kg	83 U	33 U	84 U	1.8 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	17 U	1.7 U	1.7 U	1.7 U	1.7 U
3-Nitroaniline	mg/kg	10 U	4.1 U	10 U	0.22 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.22 U	0.22 U	0.22 U	2.2 U	0.21 U	0.22 U	0.21 U	0.21 U
4,6-Dinitro-2-methylphenol	mg/kg	7.8 U	3.1 U	7.8 U	0.17 U	R	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	1.6 U	0.16 U	0.16 U	0.16 U	0.16 U
4-Bromophenyl phenyl ether	mg/kg	14 U	5.4 U	14 U	0.29 U	0.28 U	0.27 U	0.28 U	0.28 U	0.28 U	0.28 U	0.29 U	0.29 U	0.28 U	2.9 U	0.28 U	0.29 U	0.28 U	0.28 U
4-Chloro-3-methylphenol	mg/kg	14 U	5.4 U	14 U	0.29 U	0.28 U	0.27 U	0.28 U	0.28 U	0.28 U	0.28 U	0.29 U	0.29 U	0.28 U	2.9 U	0.28 U	0.29 U	0.28 U	0.28 U
4-Chloroaniline	mg/kg	10 U	4.1 U	10 U	0.22 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.22 U	0.22 U	0.22 U	2.2 U	0.21 U	0.22 U	0.21 U	0.21 U
4-Chlorophenyl phenyl ether	mg/kg	14 U	5.4 U	14 U	0.29 U	0.28 U	0.27 U	0.28 U	0.28 U	0.28 U	0.28 U	0.29 U	0.29 U	0.28 U	2.9 U	0.28 U	0.29 U	0.28 U	0.28 U
4-Nitroaniline	mg/kg	10 U	4.1 U	10 U	0.22 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.22 U	0.22 U	0.22 U	2.2 U	0.21 U	0.22 U	0.21 U	0.21 U
4-Nitrophenol	mg/kg	17 U	6.8 U	17 U	0.37 U	R	0.34 U	0.35 U	0.35 U	0.35 U	0.35 U	0.36 U	0.36 U	0.36 U	3.6 U	0.35 U	0.36 U	0.35 U	0.35 U
Acenaphthene	mg/kg	0.37 J	0.45 J	14 U	0.29 U	0.28 U	0.27 U	0.28 U	0.28 U	0.28 U	0.0044 J	0.29 U	0.0078 J	0.28 U	0.16 J	0.017 J	0.036 J	0.28 U	0.28 U
Acenaphthylene	mg/kg	14 U	5.4 U	14 U	0.29 U	0.28 U	0.27 U	0.28 U	0.28 U	0.28 U	0.28 U	0.29 U	0.29 U	0.28 U	2.9 U	0.28 U	0.29 U	0.28 U	0.28 U
Acetophenone	mg/kg	14 U	5.4 U	14 U	0.29 U	0.28 U	0.27 U	0.28 U	0.28 U	0.28 U	0.28 U	0.29 U	0.29 U	0.28 U	2.9 U	0.28 U	0.29 U	0.28 U	0.28 U
Anthracene	mg/kg	0.39 J	0.39 J	14 U	0.29 U	0.28 U	0.27 U	0.28 U	0.0065 J	0.28 U	0.0076 J	0.0095 J	0.017 J	0.28 U	0.11 J	0.28 U	0.013 J	0.28 U	0.017 J
Atrazine	mg/kg	2.1 U	0.83 U	2.1 U	0.045 U	0.042 U	0.042 U	0.042 U	0.042 U	0.043 U	0.042 U	0.044 U	0.044 U	0.043 U	0.43 U	0.042 U	0.043 U	0.042 U	0.043 U
Benzaldehyde	mg/kg	14 U	5.4 U	14 U	0.29 U	0.28 U	0.27 U	0.28 U	0.28 U	0.28 U	0.28 U	0.29 U	0.29 U	0.28 U	2.9 U	0.28 U	0.29 U	0.28 U	0.28 U
Benzo(a)anthracene	mg/kg	0.47 J	0.46 J	14 U	0.29 U	0.28 U	0.045 J	0.28 U	0.022 J	0.28 U	0.018 J	0.022 J	0.077 J	0.28 U	0.16 J	0.28 U	0.059 J	0.28 U	0.18 J
Benzo(a)pyrene	mg/kg	0.27 J	0.35 J	14 U	0.29 U	0.28 U	0.05 J	0.28 U	0.02 J	0.28 U	0.026 J	0.025 J	0.069 J	0.28 U	0.06 J	0.28 U	0.054 J	0.28 U	0.12 J
Benzo(b)fluoranthene	mg/kg	14 U	0.48 J	14 U	0.29 U	0.28 U	0.084 J	0.28 U	0.042 J	0.28 U	0.032 J	0.028 J	0.1 J	0.28 U	0.083 J	0.28 U	0.077 J	0.28 U	0.18 J
Benzo(g,h,i)perylene	mg/kg	14 U	0.24 J	14 U	0.29 U	0.28 U	0.049 J	0.28 U	0.015 J	0.28 U	0.053 J	0.04 J	0.049 J	0.28 U	2.9 U	0.28 U	0.043 J	0.28 U	0.062 J
Benzo(k)fluoranthene	mg/kg	14 U	0.22 J	14 U	0.29 U	0.28 U	0.033 J	0.28 U	0.014 J	0.28 U	0.28 U	0.017 J	0.051 J	0.28 U	2.9 U	0.28 U	0.035 J	0.28 U	0.1 J
Biphenyl (1,1-Biphenyl)	mg/kg	14 U	5.4 U	14 U	0.29 U	0.28 U	0.27 U	0.28 U	0.28 U	0.28 U	0.28 U	0.29 U	0.29 U	0.28 U	2.9 U	0.28 U	0.29 U	0.28 U	0.28 U
bis(2-Chloroethoxy)methane	mg/kg	14 U	5.4 U	14 U	0.29 U	0.28 U	0.27 U	0.28 U	0.28 U	0.28 U	0.28 U	0.29 U	0.29 U	0.28 U	2.9 U	0.28 U	0.29 U	0.28 U	0.28 U
bis(2-Chloroethyl)ether	mg/kg	4.1 U	1.7 U	4.2 U	0.089 U	0.084 U	0.083 U	0.084 U	0.085 U	0.086 U	0.084 U	0.087 U	0.087 U	0.086 U	0.87 U	0.084 U	0.087 U	0.084 U	0.085 U
bis(2-Ethylhexyl)phthalate (DEHP)	mg/kg	14 U	0.43 J	14 U	0.025 J	0.029 J	0.27 U	0.28 U	0.022 J	0.28 U	0.28 U	0.29 U	0.29 U	0.28 U	2.9 U	0.28 U	0.049 J	0.041 J	0.28 U

TABLE 3.8

PART 201 CRITERIA EXCEEDANCES - SOIL
2013 RFI REPORT
FORMER GENERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation		*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*
Perimeter Status (1)		*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*
Sample Location		*CRA-758SB*	*CRA-759SB*	*CRA-759SB*	*CRA-760SB*	*CRA-760SB*	*CRA-762SB*	*CRA-762SB*	*CRA-763SB*	*CRA-763SB*	*CRA-763SB*	*CRA-764SB*	*CRA-764SB*	*CRA-765SB*	*CRA-765SB*	*CRA-766SB*	*CRA-766SB*	*CRA-768SB*	*CRA-768SB*	*CRA-822SB*
Sample Identification (SO-17358-)		*030112-CB-112*	*030712-CB-157*	*030712-CB-158*	*030712-CB-155*	*030712-CB-156*	*030112-CB-107*	*030112-CB-108*	*032612-CB-255*	*032612-CB-256*	*030112-CB-103*	*030112-CB-104*	*030112-CB-105*	*030112-CB-106*	*031412-CB-197*	*031412-CB-198*	*030712-CB-151*	*030712-CB-152*	*030112-CB-109*
Sample Date		*3/1/2012*	*3/7/2012*	*3/7/2012*	*3/7/2012*	*3/7/2012*	*3/1/2012*	*3/1/2012*	*3/26/2012*	*3/26/2012*	*3/1/2012*	*3/1/2012*	*3/1/2012*	*3/1/2012*	*3/14/2012*	*3/14/2012*	*3/7/2012*	*3/7/2012*	*3/1/2012*
Sample Depth		*(6-8) ft BGS*	*(1-3) ft BGS*	*(5-7) ft BGS*	*(1-3) ft BGS*	*(5-7) ft BGS*	*(1-3) ft BGS*	*(3-5) ft BGS*	*(1-3) ft BGS*	*(4-6) ft BGS*	*(1-3) ft BGS*	*(3-5) ft BGS*	*(1-3) ft BGS*	*(4-6) ft BGS*	*(0.5-2.5) ft BGS*	*(3-5) ft BGS*	*(1-3) ft BGS*	*(4-6) ft BGS*	*(1-3) ft BGS*
Sample Type																			
	Units																		
SVOCs Continued																			
Butyl benzylphthalate (BBP)	mg/kg	14 U	5.4 U	14 U	0.29 U	0.28 U	0.27 U	0.28 U	0.28 U	0.28 U	0.28 U	0.29 U	0.29 U	0.28 U	2.9 U	0.28 U	0.29 U	0.28 U	0.28 U
Caprolactam	mg/kg	14 U	5.4 U	14 U	0.29 U	0.28 U	0.27 U	0.28 U	0.28 U	0.28 U	0.28 U	0.29 U	0.29 U	0.28 U	2.9 U	0.28 U	0.29 U	0.28 U	0.28 U
Carbazole	mg/kg	14 U	5.4 U	14 U	0.29 U	0.28 U	0.27 U	0.28 U	0.28 U	0.28 U	0.28 U	0.29 U	0.29 U	0.28 U	2.9 U	0.28 U	0.29 U	0.28 U	0.28 U
Chrysene	mg/kg	0.37 J	0.56 J	14 U	0.29 U	0.28 U	0.056 J	0.28 U	0.028 J	0.28 U	0.024 J	0.027 J	0.086 J	0.28 U	0.15 J	0.28 U	0.07 J	0.28 U	0.18 J
Dibenz(a,h)anthracene	mg/kg	14 U	5.4 U	14 U	0.29 U	0.28 U	0.27 U	0.28 U	0.28 U	0.28 U	0.28 U	0.29 U	0.29 U	0.28 U	2.9 U	0.28 U	0.29 U	0.28 U	0.28 U
Dibenzofuran	mg/kg	0.23 J	0.33 J	14 U	0.29 U	0.28 U	0.27 U	0.28 U	0.0054 J	0.28 U	0.28 U	0.29 U	0.29 U	0.28 U	2.9 U	0.28 U	0.29 U	0.28 U	0.28 U
Diethyl phthalate	mg/kg	14 U	5.4 U	14 U	0.29 U	0.28 U	0.27 U	0.28 U	0.28 U	0.28 U	0.28 U	0.29 U	0.29 U	0.28 U	2.9 U	0.28 U	0.29 U	0.28 U	0.28 U
Dimethyl phthalate	mg/kg	14 U	5.4 U	14 U	0.29 U	0.28 U	0.27 U	0.28 U	0.28 U	0.28 U	0.28 U	0.29 U	0.29 U	0.28 U	2.9 U	0.28 U	0.29 U	0.28 U	0.28 U
Di-n-butylphthalate (DBP)	mg/kg	14 U	5.4 U	14 U	0.29 U	0.28 U	0.27 U	0.28 U	0.28 U	0.28 U	0.28 U	0.29 U	0.29 U	0.28 U	2.9 U	0.28 U	0.29 U	0.28 U	0.28 U
Di-n-octyl phthalate (DnOP)	mg/kg	14 U	5.4 U	14 U	0.29 U	0.28 U	0.27 U	0.28 U	0.28 U	0.28 U	0.28 U	0.29 U	0.29 U	0.28 U	2.9 U	0.28 U	0.29 U	0.28 U	0.28 U
Fluoranthene	mg/kg	1.7 J	1.6 J	14 U	0.29 U	0.28 U	0.064 J	0.28 U	0.061 J	0.28 U	0.039 J	0.052 J	0.15 J	0.28 U	0.6 J	0.28 U	0.32	0.28 U	0.21 J
Fluorene	mg/kg	0.45 J	0.47 J	0.65 J	0.29 U	0.28 U	0.27 U	0.28 U	0.0063 J	0.28 U	0.0036 J	0.29 U	0.0042 J	0.28 U	0.21 J	0.017 J	0.012 J	0.28 U	0.28 U
Hexachlorobenzene	mg/kg	14 U	5.4 U	14 U	0.29 U	0.28 U	0.27 U	0.28 U	0.28 U	0.28 U	0.28 U	0.29 U	0.29 U	0.28 U	2.9 U	0.28 U	0.29 U	0.28 U	0.28 U
Hexachlorobutadiene	mg/kg	2.1 U	0.83 U	2.1 U	0.045 U	0.042 U	0.042 U	0.042 U	0.042 U	0.043 U	0.042 U	0.044 U	0.044 U	0.043 U	0.43 U	0.042 U	0.043 U	0.042 U	0.043 U
Hexachlorocyclopentadiene	mg/kg	14 U	5.4 U	14 U	0.29 U	0.28 U	0.27 U	0.28 U	0.28 U	0.28 U	0.28 U	0.29 U	0.29 U	0.28 U	2.9 U	0.28 U	0.29 U	0.28 U	0.28 U
Hexachloroethane	mg/kg	14 U	5.4 U	14 U	0.29 U	0.28 U	0.27 U	0.28 U	0.28 U	0.28 U	0.28 U	0.29 U	0.29 U	0.28 U	2.9 U	0.28 U	0.29 U	0.28 U	0.28 U
Indeno(1,2,3-cd)pyrene	mg/kg	14 U	0.2 J	14 U	0.29 U	0.28 U	0.037 J	0.28 U	0.012 J	0.28 U	0.039 J	0.03 J	0.039 J	0.28 U	2.9 U	0.28 U	0.029 J	0.28 U	0.057 J
Isophorone	mg/kg	14 U	5.4 U	14 U	0.29 U	0.28 U	0.27 U	0.28 U	0.28 U	0.28 U	0.28 U	0.29 U	0.29 U	0.28 U	2.9 U	0.28 U	0.29 U	0.28 U	0.28 U
Naphthalene	mg/kg	14 U	0.17 J	0.56 J	0.0073 J	0.28 U	0.27 U	0.28 U	0.004 J	0.0052 J	0.28 U	0.29 U	0.29 U	0.28 U	2.9 U	0.0096 J	0.016 J	0.51	0.28 U
Nitrobenzene	mg/kg	14 U	5.4 U	14 U	0.29 U	0.28 U	0.27 U	0.28 U	0.28 U	0.28 U	0.28 U	0.29 U	0.29 U	0.28 U	2.9 U	0.28 U	0.29 U	0.28 U	0.28 U
N-Nitrosodi-n-propylamine	mg/kg	14 U	5.4 U	14 U	0.29 U	0.28 U	0.27 U	0.28 U	0.28 U	0.28 U	0.28 U	0.29 U	0.29 U	0.28 U	2.9 U	0.28 U	0.29 U	0.28 U	0.28 U
N-Nitrosodiphenylamine	mg/kg	14 U	5.4 U	14 U	0.29 U	0.28 U	0.27 U	0.28 U	0.28 U	0.28 U	0.28 U	0.29 U	0.29 U	0.28 U	2.9 U	0.28 U	0.29 U	0.28 U	0.28 U
Pentachlorophenol	mg/kg	7.8 U	3.1 U	7.8 U	0.17 U	R	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	1.6 U	0.16 U	0.16 U	0.16 U	0.16 U
Phenanthrene	mg/kg	1.7 J	1.6 J	1.6 J	0.29 U	0.28 U	0.015 J	0.28 U	0.052 J	0.28 U	0.032 J	0.033 J	0.076 J	0.28 U	0.54 J	0.0044 J	0.039 J	0.28 U	0.057 J
Phenol	mg/kg	14 U	5.4 U	14 U	0.29 U	0.28 U	0.27 U	0.28 U	0.28 U	0.28 U	0.28 U	0.29 U	0.29 U	0.28 U	2.9 U	0.28 U	0.29 U	0.28 U	0.28 U
Pyrene	mg/kg	1.9 J	1.1 J	0.68 J	0.29 U	0.28 U	0.068 J	0.28 U	0.05 J	0.0038 J	0.036 J	0.041 J	0.12 J	0.28 U	0.38 J	0.28 U	0.27 J	0.28 U	0.19 J
Metals																			
Aluminum	mg/kg	1400	2200	2600	**9800**[c]	1600	2900	2700	2500	2100	2400	2500	4700	2800	3300	2000	3600	1900	2600
Antimony	mg/kg	0.053 J	0.058 J	0.096 J	0.029 J	0.056 J	0.43 J	0.044 J	0.023 J	0.067 J	0.054 J	0.046 J	0.05 J	0.036 J	0.12 J	0.036 J	0.034 J	0.14 UJ	0.037 J
Arsenic	mg/kg	0.9	3.3	3.6	**6.9**[cd]	2	3.6	3.7	2.1	5.4	3.5	3.2	4.2	2.2	**10**[cd]	1.1	2.9	0.45	2.3
Barium	mg/kg	5.6	15	11	33	7.3	20	10	14	6.1	15	13	18	18	27	7.1	30	8.8	10
Beryllium	mg/kg	0.06 J	0.15 U	0.15 U	0.23	0.16 U	0.22	0.11 J	0.13 J	0.16 J	0.11 J	0.1 J	0.2	0.1 J	0.15 U	0.15 U	0.084 J	0.14 U	0.12 J
Cadmium	mg/kg	0.11	1.7	0.26	0.19	0.1	0.15	0.15	0.077 U	0.049 J	0.16	0.16	0.18	0.099	0.21	0.074 U	0.14	0.046 J	0.093
Calcium	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chromium	mg/kg	3.4	6.8	6.4	18	5.2	6.5	6.2	5.9	4.3	5.6	8.1	13	4.7	14	5.1	7.1	5.3	5.5
Chromium III (trivalent)	mg/kg	-	6.4	5.8	-	-	-	-	5.9	4.3	5.6	8.1	-	-	14	5.1	-	-	-
Chromium VI (hexavalent)	mg/kg	-	0.38 J	0.6 J	-	-	-	-	0.85 U	0.86 U	0.85 UJ	0.87 UJ	-	-	0.87 U	0.84 U	-	-	-
Cobalt	mg/kg	1.7	3.8	3.2	5.1	2.1	3.4	2.8	2.4	3.2	2.4	2.6	4.4	2	4.2	1.9	2.7	1.8	2.1
Copper	mg/kg	6.8 J	26	9.5	13	6.4	14 J	8.4 J	8.5	10	8.6	10	11	4.8	35	2	7.9	3.3	5.6 J
Iron	mg/kg	3000	6100	7000	**17000**[c]	4500	6400	6800	5200	7200	6700	6600	10000	4900	12000	4700	6700	2800	5400
Lead	mg/kg	2.9	9.1	7.9	8.1	2.7	-	3.1	2.9	3.3	5.3	4.9	16	3.1	17	2.9	9.8	2.8	3.3
Lead - coarse fraction	mg/kg	-	-	-	-	-	18	-	-	-	-	-	-	-	-	-	-	-	-
Lead - fine fraction	mg/kg	-	-	-	-	-	46	-	-	-	-	-	-	-	-	-	-	-	-
Lead - total (calculated by fine/coarse fraction)	mg/kg	-	-	-	-	-	24	-	-	-	-	-	-	-	-	-	-	-	-
Magnesium	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

TABLE 3.8

PART 201 CRITERIA EXCEEDANCES - SOIL
2013 RFI REPORT
FORMER GENERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation		*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*
Perimeter Status (1)		*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*
Sample Location		*CRA-758SB*	*CRA-759SB*	*CRA-759SB*	*CRA-760SB*	*CRA-760SB*	*CRA-762SB*	*CRA-762SB*	*CRA-763SB*	*CRA-763SB*	*CRA-763SB*	*CRA-764SB*	*CRA-764SB*	*CRA-765SB*	*CRA-765SB*	*CRA-766SB*	*CRA-766SB*	*CRA-768SB*	*CRA-768SB*	*CRA-822SB*
Sample Identification (SO-17358-)		*030112-CB-112*	*030712-CB-157*	*030712-CB-158*	*030712-CB-155*	*030712-CB-156*	*030112-CB-107*	*030112-CB-108*	*032612-CB-255*	*032612-CB-256*	*030112-CB-103*	*030112-CB-104*	*030112-CB-105*	*030112-CB-106*	*031412-CB-197*	*031412-CB-198*	*030712-CB-151*	*030712-CB-152*	*030112-CB-109*
Sample Date		*3/1/2012*	*3/7/2012*	*3/7/2012*	*3/7/2012*	*3/7/2012*	*3/1/2012*	*3/1/2012*	*3/26/2012*	*3/26/2012*	*3/1/2012*	*3/1/2012*	*3/1/2012*	*3/1/2012*	*3/14/2012*	*3/14/2012*	*3/7/2012*	*3/7/2012*	*3/1/2012*
Sample Depth		*(6-8) ft BGS*	*(1-3) ft BGS*	*(5-7) ft BGS*	*(1-3) ft BGS*	*(5-7) ft BGS*	*(1-3) ft BGS*	*(3-5) ft BGS*	*(1-3) ft BGS*	*(4-6) ft BGS*	*(1-3) ft BGS*	*(3-5) ft BGS*	*(1-3) ft BGS*	*(4-6) ft BGS*	*(0.5-2.5) ft BGS*	*(3-5) ft BGS*	*(1-3) ft BGS*	*(4-6) ft BGS*	*(1-3) ft BGS*
Sample Type																			
	Units																		
Metals Continued																			
Manganese	mg/kg	92	210	170	140	130	320	270	230 J	82 J	150	150	210	99	240	37	320	31	110
Mercury	mg/kg	0.037 U	0.041 U	0.039 U	0.066	0.016 J	0.041 U	0.043 U	0.017 J	0.015 J	0.018 J	0.039 U	0.046 U	0.019 J	0.046 U	0.044	0.017 J	0.041 U	0.046 U
Nickel	mg/kg	5.4	9.4	11	13	6.2	7.5	8	8.8	8.8	6.5	7.3	12	5.8	12	4.7	7.3	5.2	5.9
Potassium	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Selenium	mg/kg	0.26	**0.54**[d]	0.29	**0.9**[d]	0.25	0.32	0.19	0.22 J	0.34 J	0.23	0.25	0.29	0.19	0.36 J	0.24 J	**0.48**[d]	0.26	0.29
Silver	mg/kg	0.066 U	0.073 U	0.076 U	0.018 J	0.079 U	0.076 U	0.08 U	0.077 U	0.083 U	0.078 U	0.077 U	0.023 J	0.079 U	0.026 J	0.074 U	0.083 U	0.07 U	0.081 U
Sodium	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Thallium	mg/kg	0.094 U	0.097 U	0.23	0.097 U	0.098 U	0.17	0.14	0.077 U	0.083 U	0.087 U	0.085 U	0.089 U	0.079 U	0.18	0.074 U	0.099 U	0.07 U	0.1 U
Vanadium	mg/kg	5.8	7.9	12	28	6.6	8.4	8.7	7.5	7.1	9	8.9	13	8.2	13	7.4	9.8	6.7	8.6
Zinc	mg/kg	16	22	28	34	12	18	20	14	19	20	22	25	13	38	13	20	12	16
Polychlorinated biphenyls (PCBs)																			
Aroclor-1016 (PCB-1016)	mg/kg	0.034 U	0.034 U	0.7 U	0.037 U	0.034 U	0.034 U	0.034 U	0.035 U	0.035 U	0.035 U	0.036 U	0.036 U	0.036 U	0.036 U	0.035 U	0.036 U	0.035 U	0.035 U
Aroclor-1221 (PCB-1221)	mg/kg	0.034 U	0.034 U	0.7 U	0.037 U	0.034 U	0.034 U	0.034 U	0.035 U	0.035 U	0.035 U	0.036 U	0.036 U	0.036 U	0.036 U	0.035 U	0.036 U	0.035 U	0.035 U
Aroclor-1232 (PCB-1232)	mg/kg	0.034 U	0.034 U	0.7 U	0.037 U	0.034 U	0.034 U	0.034 U	0.035 U	0.035 U	0.035 U	0.036 U	0.036 U	0.036 U	0.036 U	0.035 U	0.036 U	0.035 U	0.035 U
Aroclor-1242 (PCB-1242)	mg/kg	0.033 J	0.034 U	0.7 U	0.037 U	0.034 U	0.034 U	0.034 U	0.035 U	0.035 U	0.035 U	0.036 U	0.036 U	0.036 U	0.036 U	0.035 U	0.036 U	0.035 U	0.035 U
Aroclor-1248 (PCB-1248)	mg/kg	0.034 U	0.034 U	0.7 U	0.037 U	0.034 U	0.034 U	0.034 U	0.035 U	0.035 U	0.035 U	0.036 U	0.036 U	0.036 U	0.036 U	0.035 U	0.036 U	0.035 U	0.035 U
Aroclor-1254 (PCB-1254)	mg/kg	0.034 U	0.034 U	0.7 U	0.037 U	0.034 U	0.034 U	0.034 U	0.035 U	0.035 U	0.035 U	0.036 U	0.036 U	0.036 U	0.1	0.035 U	0.036 U	0.035 U	0.035 U
Aroclor-1260 (PCB-1260)	mg/kg	0.034 U	0.031 J	0.87	0.037 U	0.034 U	0.034 U	0.034 U	0.035 U	0.035 U	0.035 U	0.036 U	0.036 U	0.036 U	0.036 U	0.035 U	0.036 U	0.035 U	0.035 U
Aroclor-1262 (PCB-1262)	mg/kg	-	-	-	-	-	-	-	0.035 U	0.035 U	-	-	-	-	-	-	-	-	-
Aroclor-1268 (PCB-1268)	mg/kg	-	-	-	-	-	-	-	0.035 U	0.035 U	-	-	-	-	-	-	-	-	-
Total PCBs	mg/kg	0.033 J	0.031 J	0.87	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.1	ND	ND	ND	ND

Notes

Michigan Part 201 generic clean up criteria (updated September 28, 2012)

ID - Insufficient data to develop criterion

NLV - Hazardous substance is not likely to volatilize under most conditions

NA - Criterion or value is not available

Perimeter Status (1) - N - non-perimeter, Y - perimeter

mg/kg - milligram/kilogram

Notes:

U - Not detected at the associated reporting limit.

J - Estimated concentration.

UJ - Not detected; associated reporting limit is estimated.

R - Rejected

TABLE 3.8

PART 201 CRITERIA EXCEEDANCES - SOIL
2013 RFI REPORT
FORMER GENERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation		*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*
Perimeter Status (1)		*N*	*N*	*N*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*
Sample Location		*CRA-822SB*	*CRA-823SB*	*CRA-823SB*	*CRA-712I*	*CRA-712I*	*CRA-785D*	*CRA-785D*	*CRA-827ML*	*CRA-701M*	*CRA-701M*	*CRA-701M*	*CRA-703I*	*CRA-703I*	*CRA-703I*	*CRA-704D*
Sample Identification (SO-17358-)		*030112-CB-110*	*030712-CB-153*	*030712-CB-154*	*022212-DR-041*	*022212-DR-042*	*032312-DR-082*	*032312-DR-083*	*031412-CB-194*	*032012-CB-213*	*032012-CB-214*	*032012-CB-215*	*031412-DR-068*	*031412-DR-069*	*031412-DR-071*	*032612-DR-084*
Sample Date		*3/1/2012*	*3/7/2012*	*3/7/2012*	*2/22/2012*	*2/22/2012*	*3/23/2012*	*3/23/2012*	*3/14/2012*	*3/20/2012*	*3/20/2012*	*3/20/2012*	*3/14/2012*	*3/14/2012*	*3/14/2012*	*3/26/2012*
Sample Depth		*(5-7) ft BGS*	*(1-3) ft BGS*	*(3-5) ft BGS*	*(1-2) ft BGS*	*(4-6) ft BGS*	*(0-2) ft BGS*	*(2.5-4.5) ft BGS*	*(2.25-4.25) ft BGS*	*(0-2) ft BGS*	*(0-2) ft BGS*	*(7.5-9.5) ft BGS*	*(0-2) ft BGS*	*(0-2) ft BGS*	*(4-6) ft BGS*	*(0-2) ft BGS*
Sample Type											*Duplicate*			*Duplicate*		
	Units															
Volatile Organic Compounds (VOCs)																
1,1,1-Trichloroethane	mg/kg	0.046 U	0.041 U	0.042 U	0.049 U	0.05 U	0.044 U	0.041 U	0.047 U	0.043 U	0.047 U	0.045 U	0.054 U	0.055 U	0.046 U	0.044 U
1,1,2,2-Tetrachloroethane	mg/kg	0.046 U	0.041 U	0.042 U	0.049 U	0.05 U	0.044 U	0.041 U	0.047 U	0.043 U	0.047 U	0.045 U	0.054 U	0.055 U	0.046 U	0.044 U
1,1,2-Trichloroethane	mg/kg	0.046 U	0.041 U	0.042 U	0.049 U	0.05 U	0.044 U	0.041 U	0.047 U	0.043 U	0.047 U	0.045 U	0.054 U	0.055 U	0.046 U	0.044 U
1,1-Dichloroethane	mg/kg	0.046 U	0.041 U	0.042 U	0.049 U	0.05 U	0.044 U	0.041 U	0.047 U	0.043 U	0.047 U	0.045 U	0.054 U	0.055 U	0.046 U	0.044 U
1,1-Dichloroethene	mg/kg	0.046 U	0.041 U	0.042 U	0.049 U	0.05 U	0.044 U	0.041 U	0.047 U	0.043 U	0.047 U	0.045 U	0.054 U	0.055 U	0.046 U	0.044 U
1,2,4-Trichlorobenzene	mg/kg	0.23 U	0.2 U	0.21 U	0.25 U	0.25 U	0.22 U	0.2 U	0.24 U	0.22 U	0.23 U	0.23 U	0.27 U	0.28 U	0.23 U	0.22 U
1,2-Dibromo-3-chloropropane (DBCP)	mg/kg	0.23 U	0.2 U	0.21 U	0.25 U	0.25 U	0.22 U	0.2 U	0.24 U	0.22 U	0.23 U	0.23 U	0.27 U	0.28 U	0.23 U	0.22 U
1,2-Dibromoethane (Ethylene dibromide)	mg/kg	0.23 U	0.2 U	0.21 U	0.25 U	0.25 U	0.22 U	0.2 U	0.24 U	0.22 U	0.23 U	0.23 U	0.27 U	0.28 U	0.23 U	0.22 U
1,2-Dichlorobenzene	mg/kg	0.092 U	0.082 U	0.085 U	0.098 U	0.1 U	0.089 U	0.081 U	0.094 U	0.086 U	0.094 U	0.09 U	0.11 U	0.11 U	0.091 U	0.088 U
1,2-Dichloroethane	mg/kg	0.046 U	0.041 U	0.042 U	0.049 U	0.05 U	0.044 U	0.041 U	0.047 U	0.043 U	0.047 U	0.045 U	0.054 U	0.055 U	0.046 U	0.044 U
1,2-Dichloropropane	mg/kg	0.046 U	0.041 U	0.042 U	0.049 U	0.05 U	0.044 U	0.041 U	0.047 U	0.043 U	0.047 U	0.045 U	0.054 U	0.055 U	0.046 U	0.044 U
1,3-Dichlorobenzene	mg/kg	0.092 U	0.082 U	0.085 U	0.098 U	0.1 U	0.089 U	0.081 U	0.094 U	0.086 U	0.094 U	0.09 U	0.11 U	0.11 U	0.091 U	0.088 U
1,4-Dichlorobenzene	mg/kg	0.092 U	0.082 U	0.085 U	0.098 U	0.1 U	0.089 U	0.081 U	0.094 U	0.086 U	0.094 U	0.09 U	0.11 U	0.11 U	0.091 U	0.088 U
2-Butanone (Methyl ethyl ketone) (MEK)	mg/kg	0.69 U	0.61 U	0.64 U	0.74 U	0.76 U	0.67 U	0.61 U	0.71 U	0.65 U	0.7 U	0.68 U	0.81 U	0.83 U	0.69 U	0.66 U
2-Hexanone	mg/kg	2.3 U	2 U	2.1 U	2.5 U	2.5 U	2.2 U	2 U	2.4 U	2.2 U	2.3 U	2.3 U	2.7 U	2.8 U	2.3 U	2.2 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	mg/kg	2.3 U	2 U	2.1 U	2.5 U	2.5 U	2.2 U	2 U	2.4 U	2.2 U	2.3 U	2.3 U	2.7 U	2.8 U	2.3 U	2.2 U
Acetone	mg/kg	0.69 U	0.61 U	0.64 U	0.74 U	0.76 U	0.67 U	0.61 U	0.71 U	0.65 U	0.7 U	0.68 U	0.81 U	0.83 U	0.69 U	0.66 U
Benzene	mg/kg	0.046 U	0.041 U	0.042 U	0.049 U	0.05 U	0.044 U	0.041 U	0.047 U	0.043 U	0.047 U	0.045 U	0.054 U	0.055 U	0.046 U	0.044 U
Bromodichloromethane	mg/kg	0.092 U	0.082 U	0.085 U	0.098 U	0.1 U	0.089 U	0.081 U	0.094 U	0.086 U	0.094 U	0.09 U	0.11 U	0.11 U	0.091 U	0.088 U
Bromoform	mg/kg	0.092 U	0.082 U	0.085 U	0.098 U	0.1 U	0.089 U	0.081 U	0.094 U	0.086 U	0.094 U	0.09 U	0.11 U	0.11 U	0.091 U	0.088 U
Bromomethane (Methyl bromide)	mg/kg	0.23 U	0.2 U	0.21 U	0.25 U	0.25 U	0.22 U	0.2 U	0.24 U	0.22 U	0.23 U	0.23 U	0.27 U	0.28 U	0.23 U	0.22 U
Carbon disulfide	mg/kg	0.23 U	0.2 U	0.21 U	0.25 U	0.25 U	0.22 U	0.2 U	0.24 U	0.22 U	0.23 U	0.23 U	0.27 U	0.28 U	0.23 U	0.22 U
Carbon tetrachloride	mg/kg	0.046 U	0.041 U	0.042 U	0.049 U	0.05 U	0.044 U	0.041 U	0.047 U	0.043 U	0.047 U	0.045 U	0.054 U	0.055 U	0.046 U	0.044 U
Chlorobenzene	mg/kg	0.046 U	0.041 U	0.042 U	0.049 U	0.05 U	0.044 U	0.041 U	0.047 U	0.043 U	0.047 U	0.045 U	0.054 U	0.055 U	0.046 U	0.044 U
Chloroethane	mg/kg	0.23 U	0.2 U	0.21 U	0.25 U	0.25 U	0.22 U	0.2 U	0.24 U	0.22 U	0.23 U	0.23 U	0.27 U	0.28 U	0.23 U	0.22 U
Chloroform (Trichloromethane)	mg/kg	0.046 U	0.041 U	0.042 U	0.049 U	0.05 U	0.044 U	0.041 U	0.047 U	0.043 U	0.047 U	0.045 U	0.054 U	0.055 U	0.046 U	0.044 U
Chloromethane (Methyl chloride)	mg/kg	0.23 U	0.2 U	0.21 U	0.25 U	0.25 U	0.22 U	0.2 U	0.24 U	0.22 U	0.23 U	0.23 U	0.27 U	0.28 U	0.23 U	0.22 U
cis-1,2-Dichloroethene	mg/kg	0.046 U	0.041 U	0.042 U	0.049 U	0.05 U	0.044 U	0.041 U	0.047 U	0.043 U	0.047 U	0.045 U	0.054 U	0.055 U	0.046 U	0.044 U
cis-1,3-Dichloropropene	mg/kg	0.046 U	0.041 U	0.042 U	0.049 U	0.05 U	0.044 U	0.041 U	0.047 U	0.043 U	0.047 U	0.045 U	0.054 U	0.055 U	0.046 U	0.044 U
Cyclohexane	mg/kg	1.1 U	0.98 U	1 U	1.2 U	1.2 U	1.1 U	0.97 U	1.1 U	1 U	1.1 U	1.1 U	1.3 U	1.3 U	1.1 U	1.1 U
Dibromochloromethane	mg/kg	0.046 U	0.041 U	0.042 U	0.049 U	0.05 U	0.044 U	0.041 U	0.047 U	0.043 U	0.047 U	0.045 U	0.054 U	0.055 U	0.046 U	0.044 U
Dichlorodifluoromethane (CFC-12)	mg/kg	0.092 U	0.082 U	0.085 U	0.098 U	0.1 U	0.089 U	0.081 U	0.094 U	0.086 U	0.094 U	0.09 U	0.11 U	0.11 U	0.091 U	0.088 U
Ethylbenzene	mg/kg	0.046 U	0.041 U	0.035 J	0.049 U	0.05 U	0.044 U	0.041 U	0.047 U	0.043 U	0.047 U	0.045 U	0.054 U	0.055 U	0.046 U	0.044 U
Isopropyl benzene	mg/kg	0.23 U	0.2 U	0.21 U	0.25 U	0.25 U	0.22 U	0.2 U	0.24 U	0.22 U	0.23 U	0.23 U	0.27 U	0.28 U	0.23 U	0.22 U
Methyl acetate	mg/kg	1.1 U	0.084 J	0.15 J	1.2 U	1.2 U	1.1 U	0.97 U	1.1 U	1 U	1.1 U	1.1 U	1.3 U	1.3 U	1.1 U	1.1 U
Methyl cyclohexane	mg/kg	1.1 U	0.98 U	0.2 J	1.2 U	1.2 U	1.1 U	0.97 U	1.1 U	1 U	1.1 U	1.1 U	1.3 U	1.3 U	1.1 U	1.1 U
Methyl tert butyl ether (MTBE)	mg/kg	0.23 U	0.2 U	0.21 U	0.25 U	0.25 U	0.22 U	0.2 U	0.24 U	0.22 U	0.23 U	0.23 U	0.27 U	0.28 U	0.23 U	0.22 U
Methylene chloride	mg/kg	0.23 U	0.2 U	0.21 U	0.25 U	0.25 U	0.22 U	0.2 U	0.24 U	0.22 U	0.23 U	0.23 U	0.27 U	0.28 U	0.23 U	0.22 U
Styrene	mg/kg	0.046 U	0.041 U	0.042 U	0.049 U	0.05 U	0.044 U	0.041 U	0.047 U	0.043 U	0.047 U	0.045 U	0.054 U	0.055 U	0.046 U	0.044 U
Tetrachloroethene	mg/kg	0.014 J	0.041 U	0.042 U	0.049 U	0.05 U	0.044 U	0.041 U	0.047 U	0.043 U	0.047 U	0.045 U	0.054 U	0.055 U	0.046 U	0.044 U
Toluene	mg/kg	0.092 U	0.082 U	0.019 J	0.098 U	0.1 U	0.089 U	0.081 U	0.094 U	0.086 U	0.094 U	0.09 U	0.11 U	0.11 U	0.091 U	0.088 U
trans-1,2-Dichloroethene	mg/kg	0.046 U	0.041 U	0.042 U	0.049 U	0.05 U	0.044 U	0.041 U	0.047 U	0.043 U	0.047 U	0.045 U	0.054 U	0.055 U	0.046 U	0.044 U
trans-1,3-Dichloropropene	mg/kg	0.046 U	0.041 U	0.042 U	0.049 U	0.05 U	0.044 U	0.041 U	0.047 U	0.043 U	0.047 U	0.045 U	0.054 U	0.055 U	0.046 U	0.044 U
Trichloroethene	mg/kg	0.046 U	0.041 U	0.01 J	0.049 U	**0.12**[bc]	0.044 U	0.041 U	0.047 U	0.043 U	0.047 U	0.045 U	0.054 U	0.055 U	0.046 U	0.044 U

TABLE 3.8

PART 201 CRITERIA EXCEEDANCES - SOIL
2013 RFI REPORT
FORMER GENERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation		*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*
Perimeter Status (1)		*N*	*N*	*N*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*
Sample Location		*CRA-822SB*	*CRA-823SB*	*CRA-823SB*	*CRA-712I*	*CRA-712I*	*CRA-785D*	*CRA-785D*	*CRA-827ML*	*CRA-701M*	*CRA-701M*	*CRA-701M*	*CRA-703I*	*CRA-703I*	*CRA-703I*	*CRA-704D*
Sample Identification (SO-17358-)		*030112-CB-110*	*030712-CB-153*	*030712-CB-154*	*022212-DR-041*	*022212-DR-042*	*032312-DR-082*	*032312-DR-083*	*031412-CB-194*	*032012-CB-213*	*032012-CB-214*	*032012-CB-215*	*031412-DR-068*	*031412-DR-069*	*031412-DR-071*	*032612-DR-084*
Sample Date		*3/1/2012*	*3/7/2012*	*3/7/2012*	*2/22/2012*	*2/22/2012*	*3/23/2012*	*3/23/2012*	*3/14/2012*	*3/20/2012*	*3/20/2012*	*3/20/2012*	*3/14/2012*	*3/14/2012*	*3/14/2012*	*3/26/2012*
Sample Depth		*(5-7) ft BGS*	*(1-3) ft BGS*	*(3-5) ft BGS*	*(1-2) ft BGS*	*(4-6) ft BGS*	*(0-2) ft BGS*	*(2.5-4.5) ft BGS*	*(2.25-4.25) ft BGS*	*(0-2) ft BGS*	*(0-2) ft BGS*	*(7.5-9.5) ft BGS*	*(0-2) ft BGS*	*(0-2) ft BGS*	*(4-6) ft BGS*	*(0-2) ft BGS*
Sample Type											*Duplicate*			*Duplicate*		
	Units															
VOCs Continued																
Trichlorofluoromethane (CFC-11)	mg/kg	0.092 U	0.082 U	0.085 U	0.098 U	0.1 U	0.089 U	0.081 U	0.094 U	0.086 U	0.094 U	0.09 U	0.11 U	0.11 U	0.091 U	0.088 U
Trifluorotrichloroethane (Freon 113)	mg/kg	0.23 U	0.2 U	0.21 U	0.25 U	0.25 U	0.22 U	0.2 U	0.24 U	0.22 U	0.23 U	0.23 U	0.27 U	0.28 U	0.23 U	0.22 U
Vinyl chloride	mg/kg	0.037 U	0.033 U	0.034 U	0.039 U	0.04 U	0.036 U	0.032 U	0.038 U	0.034 U	0.038 U	0.036 U	0.043 U	0.044 U	0.037 U	0.035 U
Xylenes (total)	mg/kg	0.14 U	0.12 U	0.12 J	0.15 U	0.15 U	0.13 U	0.12 U	0.14 U	0.13 U	0.14 U	0.14 U	0.16 U	0.17 U	0.14 U	0.13 U
Semi-Volatile Organic Compounds (SVOCs)																
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	mg/kg	0.3 U	15 U	28 U	0.29 U	0.28 U	0.28 U	0.29 U	0.29 U	0.29 U	0.29 U	0.3 U	0.31 U	0.29 U	0.3 U	0.29 U
2,4,5-Trichlorophenol	mg/kg	0.3 U	15 U	28 U	0.29 U	0.28 U	0.28 U	0.29 U	0.29 U	0.29 U	0.29 U	0.3 U	0.31 U	0.29 U	0.3 U	0.29 U
2,4,6-Trichlorophenol	mg/kg	0.3 U	15 U	28 U	0.29 U	0.28 U	0.28 U	0.29 U	0.29 U	0.29 U	0.29 U	0.3 U	0.31 U	0.29 U	0.3 U	0.29 U
2,4-Dichlorophenol	mg/kg	0.3 U	15 U	28 U	0.29 U	0.28 U	0.28 U	0.29 U	0.29 U	0.29 U	0.29 U	0.3 U	0.31 U	0.29 U	0.3 U	0.29 U
2,4-Dimethylphenol	mg/kg	0.3 U	15 U	28 U	0.29 U	0.28 U	0.28 U	0.29 U	0.29 U	0.29 U	0.29 U	0.3 U	0.31 U	0.29 U	0.3 U	0.29 U
2,4-Dinitrophenol	mg/kg	0.17 U	8.3 U	16 U	0.17 U	0.16 U	0.16 U	0.16 U	0.17 U	0.16 U	0.16 U	0.17 U	0.18 U	0.16 U	0.17 U	0.17 U
2,4-Dinitrotoluene	mg/kg	0.3 U	15 U	28 U	0.29 U	0.28 U	0.28 U	0.29 U	0.29 U	0.29 U	0.29 U	0.3 U	0.31 U	0.29 U	0.3 U	0.29 U
2,6-Dinitrotoluene	mg/kg	0.3 U	15 U	28 U	0.29 U	0.28 U	0.28 U	0.29 U	0.29 U	0.29 U	0.29 U	0.3 U	0.31 U	0.29 U	0.3 U	0.29 U
2-Chloronaphthalene	mg/kg	0.3 U	15 U	28 U	0.29 U	0.28 U	0.28 U	0.29 U	0.29 U	0.29 U	0.29 U	0.3 U	0.31 U	0.29 U	0.3 U	0.29 U
2-Chlorophenol	mg/kg	0.3 U	15 U	28 U	0.29 U	0.28 U	0.28 U	0.29 U	0.29 U	0.29 U	0.29 U	0.3 U	0.31 U	0.29 U	0.3 U	0.29 U
2-Methylnaphthalene	mg/kg	0.3 U	15 U	28 U	0.29 U	0.28 U	0.28 U	0.29 U	0.29 U	0.29 U	0.29 U	0.3 U	0.31 U	0.29 U	0.3 U	0.29 U
2-Methylphenol	mg/kg	0.3 U	15 U	28 U	0.29 U	0.28 U	0.28 U	0.29 U	0.29 U	0.29 U	0.29 U	0.3 U	0.31 U	0.29 U	0.3 U	0.29 U
2-Nitroaniline	mg/kg	0.23 U	11 U	21 U	0.22 U	0.21 U	0.21 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.23 U	0.22 U	0.23 U	0.22 U
2-Nitrophenol	mg/kg	0.3 U	15 U	28 U	0.29 U	0.28 U	0.28 U	0.29 U	0.29 U	0.29 U	0.29 U	0.3 U	0.31 U	0.29 U	0.3 U	0.29 U
3&4-Methylphenol	mg/kg	0.3 U	15 U	28 U	0.29 U	0.28 U	0.28 U	0.29 U	0.29 U	0.29 U	0.29 U	0.3 U	0.31 U	0.29 U	0.3 U	0.29 U
3,3'-Dichlorobenzidine	mg/kg	1.8 U	88 U	170 U	1.8 U	1.7 U	1.7 U	1.7 U	1.8 U	1.7 U	1.7 U	1.8 U	1.9 U	1.7 U	1.8 U	1.8 U
3-Nitroaniline	mg/kg	0.23 U	11 U	21 U	0.22 U	0.21 U	0.21 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.23 U	0.22 U	0.23 U	0.22 U
4,6-Dinitro-2-methylphenol	mg/kg	0.17 U	8.3 U	16 U	0.17 U	0.16 U	0.16 U	0.16 U	0.17 U	0.16 U	0.16 U	0.17 U	0.18 U	0.16 U	0.17 U	0.17 U
4-Bromophenyl phenyl ether	mg/kg	0.3 U	15 U	28 U	0.29 U	0.28 U	0.28 U	0.29 U	0.29 U	0.29 U	0.29 U	0.3 U	0.31 U	0.29 U	0.3 U	0.29 U
4-Chloro-3-methylphenol	mg/kg	0.3 U	15 U	28 U	0.29 U	0.28 U	0.28 U	0.29 U	0.29 U	0.29 U	0.29 U	0.3 U	0.31 U	0.29 U	0.3 U	0.29 U
4-Chloroaniline	mg/kg	0.23 U	11 U	21 U	0.22 U	0.21 U	0.21 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.23 U	0.22 U	0.23 U	0.22 U
4-Chlorophenyl phenyl ether	mg/kg	0.3 U	15 U	28 U	0.29 U	0.28 U	0.28 U	0.29 U	0.29 U	0.29 U	0.29 U	0.3 U	0.31 U	0.29 U	0.3 U	0.29 U
4-Nitroaniline	mg/kg	0.23 U	11 U	21 U	0.22 U	0.21 U	0.21 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.23 U	0.22 U	0.23 U	0.22 U
4-Nitrophenol	mg/kg	0.38 U	18 U	35 U	0.36 U	0.35 U	0.35 U	0.36 U	0.36 U	0.36 U	0.36 U	0.37 U	0.39 U	0.36 U	0.38 U	0.36 U
Acenaphthene	mg/kg	0.3 U	15 U	28 U	0.29 U	0.28 U	0.28 U	0.29 U	0.29 U	0.29 U	0.29 U	0.3 U	0.31 U	0.29 U	0.3 U	0.29 U
Acenaphthylene	mg/kg	0.3 U	15 U	28 U	0.29 U	0.28 U	0.28 U	0.29 U	0.29 U	0.29 U	0.29 U	0.3 U	0.31 U	0.29 U	0.3 U	0.29 U
Acetophenone	mg/kg	0.3 U	15 U	28 U	0.29 U	0.28 U	0.28 U	0.29 U	0.29 U	0.29 U	0.29 U	0.3 U	0.31 U	0.29 U	0.3 U	0.29 U
Anthracene	mg/kg	0.3 U	15 U	28 U	0.29 U	0.28 U	0.28 U	0.29 U	0.29 U	0.29 U	0.29 U	0.3 U	0.31 U	0.29 U	0.3 U	0.29 U
Atrazine	mg/kg	0.045 U	2.2 U	4.2 U	0.044 U	0.042 U	0.042 U	0.044 U	0.044 U	0.044 U	0.044 U	0.045 U	0.047 U	0.044 U	0.046 U	0.044 U
Benzaldehyde	mg/kg	0.3 U	15 U	28 U	0.29 U	0.28 U	0.28 U	0.29 U	0.29 U	0.29 U	0.29 U	0.3 U	0.31 U	0.29 U	0.3 U	0.29 U
Benzo(a)anthracene	mg/kg	0.0048 J	15 U	28 U	0.008 J	0.28 U	0.28 U	0.29 U	0.018 J	0.29 U	0.29 U	0.3 U	0.31 U	0.29 U	0.3 U	0.0068 J
Benzo(a)pyrene	mg/kg	0.3 U	15 U	28 U	0.0066 J	0.28 U	0.28 U	0.29 U	0.02 J	0.29 U	0.29 U	0.3 U	0.31 U	0.29 U	0.3 U	0.0066 J
Benzo(b)fluoranthene	mg/kg	0.006 J	15 U	28 U	0.011 J	0.28 U	0.28 U	0.29 U	0.027 J	0.29 U	0.29 U	0.3 U	0.31 U	0.29 U	0.3 U	0.018 J
Benzo(g,h,i)perylene	mg/kg	0.3 U	15 U	28 U	0.29 U	0.28 U	0.28 U	0.29 U	0.033 J	0.29 U	0.29 U	0.3 U	0.31 U	0.29 U	0.3 U	0.29 U
Benzo(k)fluoranthene	mg/kg	0.3 U	15 U	28 U	0.0052 J	0.28 U	0.28 U	0.29 U	0.013 J	0.29 U	0.29 U	0.3 U	0.31 U	0.29 U	0.3 U	0.29 U
Biphenyl (1,1-Biphenyl)	mg/kg	0.3 U	15 U	28 U	0.29 U	0.28 U	0.28 U	0.29 U	0.29 U	0.29 U	0.29 U	0.3 U	0.31 U	0.29 U	0.3 U	0.29 U
bis(2-Chloroethoxy)methane	mg/kg	0.3 U	15 U	28 U	0.29 U	0.28 U	0.28 U	0.29 U	0.29 U	0.29 U	0.29 U	0.3 U	0.31 U	0.29 U	0.3 U	0.29 U
bis(2-Chloroethyl)ether	mg/kg	0.091 U	4.4 U	8.5 U	0.088 U	0.085 U	0.084 U	0.087 U	0.088 U	0.087 U	0.087 U	0.09 U	0.094 U	0.087 U	0.091 U	0.088 U
bis(2-Ethylhexyl)phthalate (DEHP)	mg/kg	0.3 U	15 U	28 U	0.29 U	0.28 U	0.28 U	0.29 U	0.12 J	0.021 J	0.29 U	0.028 J	0.31 U	0.29 U	0.3 U	0.29 U

TABLE 3.8

PART 201 CRITERIA EXCEEDANCES - SOIL
2013 RFI REPORT
FORMER GENERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation		*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*
Perimeter Status (1)		*N*	*N*	*N*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*
Sample Location		*CRA-822SB*	*CRA-823SB*	*CRA-823SB*	*CRA-712I*	*CRA-712I*	*CRA-785D*	*CRA-785D*	*CRA-827ML*	*CRA-701M*	*CRA-701M*	*CRA-701M*	*CRA-703I*	*CRA-703I*	*CRA-703I*	*CRA-704D*
Sample Identification (SO-17358-)		*030112-CB-110*	*030712-CB-153*	*030712-CB-154*	*022212-DR-041*	*022212-DR-042*	*032312-DR-082*	*032312-DR-083*	*031412-CB-194*	*032012-CB-213*	*032012-CB-214*	*032012-CB-215*	*031412-DR-068*	*031412-DR-069*	*031412-DR-071*	*032612-DR-084*
Sample Date		*3/1/2012*	*3/7/2012*	*3/7/2012*	*2/22/2012*	*2/22/2012*	*3/23/2012*	*3/23/2012*	*3/14/2012*	*3/20/2012*	*3/20/2012*	*3/20/2012*	*3/14/2012*	*3/14/2012*	*3/14/2012*	*3/26/2012*
Sample Depth		*(5-7) ft BGS*	*(1-3) ft BGS*	*(3-5) ft BGS*	*(1-2) ft BGS*	*(4-6) ft BGS*	*(0-2) ft BGS*	*(2.5-4.5) ft BGS*	*(2.25-4.25) ft BGS*	*(0-2) ft BGS*	*(0-2) ft BGS*	*(7.5-9.5) ft BGS*	*(0-2) ft BGS*	*(0-2) ft BGS*	*(4-6) ft BGS*	*(0-2) ft BGS*
Sample Type											*Duplicate*			*Duplicate*		
	Units															
SVOCs Continued																
Butyl benzylphthalate (BBP)	mg/kg	0.3 U	15 U	28 U	0.29 U	0.28 U	0.28 U	0.29 U	0.29 U	0.29 U	0.29 U	0.3 U	0.31 U	0.29 U	0.3 U	0.29 U
Caprolactam	mg/kg	0.3 U	15 U	28 U	0.29 U	0.28 U	0.28 U	0.29 U	0.29 U	0.29 U	0.29 U	0.051 J	0.31 U	0.29 U	0.3 U	0.29 U
Carbazole	mg/kg	0.3 U	15 U	28 U	0.29 U	0.28 U	0.28 U	0.29 U	0.29 U	0.29 U	0.29 U	0.3 U	0.31 U	0.29 U	0.3 U	0.29 U
Chrysene	mg/kg	0.0081 J	15 U	28 U	0.0087 J	0.28 U	0.28 U	0.29 U	0.026 J	0.29 U	0.29 U	0.3 U	0.31 U	0.29 U	0.3 U	0.01 J
Dibenz(a,h)anthracene	mg/kg	0.3 U	15 U	28 U	0.29 U	0.28 U	0.28 U	0.29 U	0.29 U	0.29 U	0.29 U	0.3 U	0.31 U	0.29 U	0.3 U	0.29 U
Dibenzofuran	mg/kg	0.3 U	15 U	28 U	0.29 U	0.28 U	0.28 U	0.29 U	0.29 U	0.29 U	0.29 U	0.3 U	0.31 U	0.29 U	0.3 U	0.29 U
Diethyl phthalate	mg/kg	0.3 U	15 U	28 U	0.29 U	0.28 U	0.28 U	0.29 U	0.29 U	0.29 U	0.29 U	0.3 U	0.31 U	0.29 U	0.3 U	0.29 U
Dimethyl phthalate	mg/kg	0.3 U	15 U	28 U	0.29 U	0.28 U	0.28 U	0.29 U	0.29 U	0.29 U	0.29 U	0.3 U	0.31 U	0.29 U	0.3 U	0.29 U
Di-n-butylphthalate (DBP)	mg/kg	0.3 U	15 U	28 U	0.29 U	0.28 U	0.28 U	0.29 U	0.29 U	0.29 U	0.29 U	0.3 U	0.31 U	0.29 U	0.3 U	0.29 U
Di-n-octyl phthalate (DnOP)	mg/kg	0.3 U	15 U	28 U	0.29 U	0.28 U	0.28 U	0.29 U	0.29 U	0.29 U	0.29 U	0.3 U	0.31 U	0.29 U	0.3 U	0.29 U
Fluoranthene	mg/kg	0.011 J	15 U	28 U	0.013 J	0.28 U	0.28 U	0.29 U	0.028 J	0.0041 J	0.29 U	0.3 U	0.31 U	0.29 U	0.3 U	0.0098 J
Fluorene	mg/kg	0.3 U	15 U	28 U	0.29 U	0.28 U	0.28 U	0.29 U	0.29 U	0.29 U	0.29 U	0.3 U	0.31 U	0.29 U	0.3 U	0.29 U
Hexachlorobenzene	mg/kg	0.3 U	15 U	28 U	0.29 U	0.28 U	0.28 U	0.29 U	0.29 U	0.29 U	0.29 U	0.3 U	0.31 U	0.29 U	0.3 U	0.29 U
Hexachlorobutadiene	mg/kg	0.045 U	2.2 U	4.2 U	0.044 U	0.042 U	0.042 U	0.044 U	0.044 U	0.044 U	0.044 U	0.045 U	0.047 U	0.044 U	0.046 U	0.044 U
Hexachlorocyclopentadiene	mg/kg	0.3 U	15 U	28 U	0.29 U	0.28 U	0.28 U	0.29 U	0.29 U	0.29 U	0.29 U	0.3 U	0.31 U	0.29 U	0.3 U	0.29 U
Hexachloroethane	mg/kg	0.3 U	15 U	28 U	0.29 U	0.28 U	0.28 U	0.29 U	0.29 U	0.29 U	0.29 U	0.3 U	0.31 U	0.29 U	0.3 U	0.29 U
Indeno(1,2,3-cd)pyrene	mg/kg	0.3 U	15 U	28 U	0.0049 J	0.28 U	0.28 U	0.29 U	0.028 J	0.29 U	0.29 U	0.3 U	0.31 U	0.29 U	0.3 U	0.29 U
Isophorone	mg/kg	0.3 U	15 U	28 U	0.29 U	0.28 U	0.28 U	0.29 U	0.29 U	0.29 U	0.29 U	0.3 U	0.31 U	0.29 U	0.3 U	0.29 U
Naphthalene	mg/kg	0.3 U	15 U	28 U	0.29 U	0.28 U	0.28 U	0.29 U	0.29 U	0.29 U	0.29 U	0.3 U	0.31 U	0.29 U	0.3 U	0.29 U
Nitrobenzene	mg/kg	0.3 U	15 U	28 U	0.29 U	0.28 U	0.28 U	0.29 U	0.29 U	0.29 U	0.29 U	0.3 U	0.31 U	0.29 U	0.3 U	0.29 U
N-Nitrosodi-n-propylamine	mg/kg	0.3 U	15 U	28 U	0.29 U	0.28 U	0.28 U	0.29 U	0.29 U	0.29 U	0.29 U	0.3 U	0.31 U	0.29 U	0.3 U	0.29 U
N-Nitrosodiphenylamine	mg/kg	0.3 U	15 U	28 U	0.29 U	0.28 U	0.28 U	0.29 U	0.29 U	0.29 U	0.29 U	0.3 U	0.31 U	0.29 U	0.3 U	0.29 U
Pentachlorophenol	mg/kg	0.17 U	8.3 U	16 U	0.17 U	0.16 U	0.16 U	0.16 U	0.17 U	0.16 U	0.16 U	0.17 U	0.18 U	0.16 U	0.17 U	0.17 U
Phenanthrene	mg/kg	0.0054 J	15 U	28 U	0.0073 J	0.28 U	0.28 U	0.29 U	0.011 J	0.29 U	0.29 U	0.3 U	0.31 U	0.29 U	0.3 U	0.0056 J
Phenol	mg/kg	0.3 U	15 U	28 U	0.29 U	0.28 U	0.28 U	0.29 U	0.29 U	0.29 U	0.29 U	0.3 U	0.31 U	0.29 U	0.3 U	0.29 U
Pyrene	mg/kg	0.0098 J	0.45 J	28 U	0.013 J	0.28 U	0.28 U	0.29 U	0.03 J	0.29 U	0.29 U	0.3 U	0.31 U	0.29 U	0.3 U	0.011 J
Metals																
Aluminum	mg/kg	2100	3000	2600	3800	1200	2200	2100	2100	2900	3200	2100	4200	4800	2500	3100
Antimony	mg/kg	0.043 J	0.1 J	0.078 J	0.033 J	0.051 J	0.06 J	0.11 J	0.06 J	0.042 J	0.045 J	0.066 J	0.045 J	0.045 J	0.035 J	0.061 J
Arsenic	mg/kg	1.7	3.6	3.1	2.4	0.5	3.5	**16**[bcdp]	1.7	1.8	2.2	5.2	3.8	2.9	2.7	4.2
Barium	mg/kg	8.9	35	19	21	4.2	11	67	5.1	8.7	10	5.4	17	22	11	14
Beryllium	mg/kg	0.085 J	0.16 U	0.15 U	0.081 J	0.15 U	0.11 J	0.13 J	0.17 U	0.15 U	0.16 U	0.18 U	0.058 J	0.068 J	0.052 J	0.17
Cadmium	mg/kg	0.087	0.31	0.2	0.081 U	0.077 U	0.091	0.17	0.084 U	0.077	0.093	0.098	0.087 U	0.081 U	0.088 U	0.05 J
Calcium	mg/kg	-	-	-	5000	38000	-	-	-	-	-	-	630	570	790	-
Chromium	mg/kg	4.5	9	6.1	7.4	3.2	4.7	4.8	5.7	4.7	5.3	5.2	8.4	7.3	7.3	6.9
Chromium III (trivalent)	mg/kg	-	-	-	-	-	4.7	4.8	5.7	4.3	4.9	4.9	-	-	-	6.9
Chromium VI (hexavalent)	mg/kg	-	-	-	-	-	0.84 U	0.87 U	0.89 U	0.36 J	0.42 J	0.37 J	-	-	-	0.88 UJ
Cobalt	mg/kg	1.8	4.6	3	2.2	1.4	3.2	3.5	2.1	2.5	3.1	2.5	3.7	3.6	2.2	2.9
Copper	mg/kg	4.9 J	26	11	2.9	5.2	8.7	14	8	3.3	3.8	5.2	8.4	5.5	5.3	8.9
Iron	mg/kg	4300	9200	7200	6900	2500	5900	11000	5100	5000	5600	8600	9000	8500	5800	8200
Lead	mg/kg	2.7	12	7.3	4	2	4.4	3.6	3.7	3.4	4.2	3.2	5	4.5	3.5	4.6
Lead - coarse fraction	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lead - fine fraction	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lead - total (calculated by fine/coarse fraction)	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Magnesium	mg/kg	-	-	-	1500	5600	-	-	-	-	-	-	1200	1200	760	-

TABLE 3.8

PART 201 CRITERIA EXCEEDANCES - SOIL
2013 RFI REPORT
FORMER GENERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation		*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*
Perimeter Status (1)		*N*	*N*	*N*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*
Sample Location		*CRA-822SB*	*CRA-823SB*	*CRA-823SB*	*CRA-712I*	*CRA-712I*	*CRA-785D*	*CRA-785D*	*CRA-827ML*	*CRA-701M*	*CRA-701M*	*CRA-701M*	*CRA-703I*	*CRA-703I*	*CRA-703I*	*CRA-704D*
Sample Identification (SO-17358-)		*030112-CB-110*	*030712-CB-153*	*030712-CB-154*	*022212-DR-041*	*022212-DR-042*	*032312-DR-082*	*032312-DR-083*	*031412-CB-194*	*032012-CB-213*	*032012-CB-214*	*032012-CB-215*	*031412-DR-068*	*031412-DR-069*	*031412-DR-071*	*032612-DR-084*
Sample Date		*3/1/2012*	*3/7/2012*	*3/7/2012*	*2/22/2012*	*2/22/2012*	*3/23/2012*	*3/23/2012*	*3/14/2012*	*3/20/2012*	*3/20/2012*	*3/20/2012*	*3/14/2012*	*3/14/2012*	*3/14/2012*	*3/26/2012*
Sample Depth		*(5-7) ft BGS*	*(1-3) ft BGS*	*(3-5) ft BGS*	*(1-2) ft BGS*	*(4-6) ft BGS*	*(0-2) ft BGS*	*(2.5-4.5) ft BGS*	*(2.25-4.25) ft BGS*	*(0-2) ft BGS*	*(0-2) ft BGS*	*(7.5-9.5) ft BGS*	*(0-2) ft BGS*	*(0-2) ft BGS*	*(4-6) ft BGS*	*(0-2) ft BGS*
Sample Type											*Duplicate*			*Duplicate*		
	Units															
Metals Continued																
Manganese	mg/kg	81	220	240	110	71	310	**810[bcd]**	91	78	110	160	230	260	140	230 J
Mercury	mg/kg	0.042 U	0.046 U	0.023 J	0.042 U	0.044 U	0.043 U	0.015 J	0.05 U	0.042 U	0.025 J	0.042 J	0.05 U	0.04 U	0.021 J	0.046 U
Nickel	mg/kg	5	10	8.1	5	4.1	7.6	11	6.1	4.8	5.4	6.3	8.9	8.3	6.3	8.2
Potassium	mg/kg	-	-	-	340 J	190 J	-	-	-	-	-	-	310 J	280 J	320 J	-
Selenium	mg/kg	0.22	0.33	0.3	0.26	0.15	0.21	0.27	0.29 J	0.14 J	0.16 J	0.15 J	0.38 J	0.26 J	**0.42 J[d]**	0.32 J
Silver	mg/kg	0.085 U	0.078 U	0.077 U	0.081 U	0.077 U	0.073 U	0.071 U	0.084 U	0.077 U	0.081 U	0.088 U	0.087 U	0.081 U	0.088 U	0.075 U
Sodium	mg/kg	-	-	-	1800	240	-	-	-	-	-	-	87 U	81 U	88 U	-
Thallium	mg/kg	0.09 U	0.14	0.18	0.074 J	0.077 U	0.11	0.11	0.18	0.077 U	0.081 U	0.088 U	0.088 U	0.087 U	0.088 U	0.1 U
Vanadium	mg/kg	7.3	11	9.7	11	5.6	7.1	8.9	7.1	7.6	8.4	8.5	12	11	8.4	9.7
Zinc	mg/kg	14	74	25	14	12	17	23	15	10	12	18	18	19	12	21
Polychlorinated biphenyls (PCBs)																
Aroclor-1016 (PCB-1016)	mg/kg	0.037 U	0.37 U	3.5 U	0.036 U	0.035 U	0.034 U	0.036 U	0.037 U	0.036 U	0.036 U	0.037 U	0.038 U	0.036 U	0.038 U	0.036 U
Aroclor-1221 (PCB-1221)	mg/kg	0.037 U	0.37 U	3.5 U	0.036 U	0.035 U	0.034 U	0.036 U	0.037 U	0.036 U	0.036 U	0.037 U	0.038 U	0.036 U	0.038 U	0.036 U
Aroclor-1232 (PCB-1232)	mg/kg	0.037 U	0.37 U	3.5 U	0.036 U	0.035 U	0.034 U	0.036 U	0.037 U	0.036 U	0.036 U	0.037 U	0.038 U	0.036 U	0.038 U	0.036 U
Aroclor-1242 (PCB-1242)	mg/kg	0.037 U	0.37 U	3.5 U	0.036 U	0.035 U	0.034 U	0.036 U	0.037 U	0.036 U	0.036 U	0.037 U	0.038 U	0.036 U	0.038 U	0.036 U
Aroclor-1248 (PCB-1248)	mg/kg	0.037 U	0.37 U	3.5 U	0.036 U	0.035 U	0.034 U	0.036 U	0.037 U	0.036 U	0.036 U	0.037 U	0.038 U	0.036 U	0.038 U	0.036 U
Aroclor-1254 (PCB-1254)	mg/kg	0.037 U	0.37 U	3.5 U	0.036 U	0.035 U	0.034 U	0.036 U	0.037 U	0.036 U	0.036 U	0.037 U	0.038 U	0.036 U	0.038 U	0.036 U
Aroclor-1260 (PCB-1260)	mg/kg	0.037 U	0.37 U	3.5 U	0.036 U	0.035 U	0.034 U	0.036 U	0.037 U	0.036 U	0.036 U	0.037 U	0.038 U	0.036 U	0.038 U	0.036 U
Aroclor-1262 (PCB-1262)	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.036 U
Aroclor-1268 (PCB-1268)	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.036 U
Total PCBs	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Notes

Michigan Part 201 generic clean up criteria (updated September 28, 2012)

ID - Insufficient data to develop criterion

NLV - Hazardous substance is not likely to volatilize under most conditions

NA - Criterion or value is not available

Perimeter Status (1) - N - non-perimeter, Y - perimeter

mg/kg - milligram/kilogram

Notes:

U - Not detected at the associated reporting limit.

J - Estimated concentration.

UJ - Not detected; associated reporting limit is estimated.

R - Rejected

TABLE 3.8

PART 201 CRITERIA EXCEEDANCES - SOIL
2013 RFI REPORT
FORMER GENERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation		*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*
Perimeter Status (1)		*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*
Sample Location		*CRA-704D*	*CRA-705M*	*CRA-705M*	*CRA-705M*	*CRA-706M*	*CRA-707SB*	*CRA-707SB*	*CRA-708SB*	*CRA-708SB*	*CRA-709M*	*CRA-709M*	*CRA-710M*
Sample Identification (SO-17358-)		*032612-DR-085*	*011812-DR-009*	*011812-DR-010*	*011812-DR-011*	*011812-DR-012*	*011812-DR-015*	*011812-DR-016*	*011812-DR-013*	*011812-DR-014*	*011712-DR-005*	*011712-DR-006*	*011812-DR-007*
Sample Date		*3/26/2012*	*1/18/2012*	*1/18/2012*	*1/18/2012*	*1/18/2012*	*1/18/2012*	*1/18/2012*	*1/18/2012*	*1/18/2012*	*1/17/2012*	*1/17/2012*	*1/18/2012*
Sample Depth		*(3-5) ft BGS*	*(0-2) ft BGS*	*(0-2) ft BGS*	*(2-3) ft BGS*	*(0-2) ft BGS*	*(0-2) ft BGS*	*(2-3) ft BGS*	*(0-2) ft BGS*	*(2-3) ft BGS*	*(0-2) ft BGS*	*(2-4) ft BGS*	*(0-2) ft BGS*
Sample Type				*Duplicate*									
	Units												
Volatile Organic Compounds (VOCs)													
1,1,1-Trichloroethane	mg/kg	0.049 U	0.045 U	0.044 U	0.044 U	0.049 U	0.042 U	0.043 U	0.05 U	0.044 U	0.043 U	0.044 U	0.045 U
1,1,2,2-Tetrachloroethane	mg/kg	0.049 U	0.045 U	0.044 U	0.044 U	0.049 U	0.042 U	0.043 U	0.05 U	0.044 U	0.043 U	0.044 U	0.045 U
1,1,2-Trichloroethane	mg/kg	0.049 U	0.045 U	0.044 U	0.044 U	0.049 U	0.042 U	0.043 U	0.05 U	0.044 U	0.043 U	0.044 U	0.045 U
1,1-Dichloroethane	mg/kg	0.049 U	0.045 U	0.044 U	0.044 U	0.049 U	0.042 U	0.043 U	0.05 U	0.044 U	0.043 U	0.044 U	0.045 U
1,1-Dichloroethene	mg/kg	0.049 U	0.045 U	0.044 U	0.044 U	0.049 U	0.042 U	0.043 U	0.05 U	0.044 U	0.043 U	0.044 U	0.045 U
1,2,4-Trichlorobenzene	mg/kg	0.24 U	0.22 U	0.22 U	0.22 U	0.25 U	0.21 U	0.21 U	0.25 U	0.22 U	0.22 U	0.22 U	0.22 U
1,2-Dibromo-3-chloropropane (DBCP)	mg/kg	0.24 U	0.22 U	0.22 U	0.22 U	0.25 U	0.21 U	0.21 U	0.25 U	0.22 U	0.22 U	0.22 U	0.22 U
1,2-Dibromoethane (Ethylene dibromide)	mg/kg	0.24 U	0.22 U	0.22 U	0.22 U	0.25 U	0.21 U	0.21 U	0.25 U	0.22 U	0.22 U	0.22 U	0.22 U
1,2-Dichlorobenzene	mg/kg	0.097 U	0.09 U	0.088 U	0.087 U	0.098 U	0.084 U	0.086 U	0.1 U	0.087 U	0.086 U	0.088 U	0.089 U
1,2-Dichloroethane	mg/kg	0.049 U	0.045 U	0.044 U	0.044 U	0.049 U	0.042 U	0.043 U	0.05 U	0.044 U	0.043 U	0.044 U	0.045 U
1,2-Dichloropropane	mg/kg	0.049 U	0.045 U	0.044 U	0.044 U	0.049 U	0.042 U	0.043 U	0.05 U	0.044 U	0.043 U	0.044 U	0.045 U
1,3-Dichlorobenzene	mg/kg	0.097 U	0.09 U	0.088 U	0.087 U	0.098 U	0.084 U	0.086 U	0.1 U	0.087 U	0.086 U	0.088 U	0.089 U
1,4-Dichlorobenzene	mg/kg	0.097 U	0.09 U	0.088 U	0.087 U	0.098 U	0.084 U	0.086 U	0.1 U	0.087 U	0.086 U	0.088 U	0.089 U
2-Butanone (Methyl ethyl ketone) (MEK)	mg/kg	0.73 U	0.67 U	0.66 U	0.65 U	0.74 U	0.63 U	0.64 U	0.75 U	0.65 U	0.65 U	0.66 U	0.67 U
2-Hexanone	mg/kg	2.4 U	2.2 U	2.2 U	2.2 U	2.5 U	2.1 U	2.1 U	2.5 U	2.2 U	2.2 U	2.2 U	2.2 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	mg/kg	2.4 U	2.2 U	2.2 U	2.2 U	2.5 U	2.1 U	2.1 U	2.5 U	2.2 U	2.2 U	2.2 U	2.2 U
Acetone	mg/kg	0.73 U	0.67 U	0.66 U	0.65 U	0.74 U	0.63 U	0.64 U	0.75 U	0.65 U	0.65 U	0.66 U	0.67 U
Benzene	mg/kg	0.049 U	0.045 U	0.044 U	0.044 U	0.049 U	0.042 U	0.043 U	0.05 U	0.044 U	0.043 U	0.044 U	0.045 U
Bromodichloromethane	mg/kg	0.097 U	0.09 U	0.088 U	0.087 U	0.098 U	0.084 U	0.086 U	0.1 U	0.087 U	0.086 U	0.088 U	0.089 U
Bromoform	mg/kg	0.097 U	0.09 U	0.088 U	0.087 U	0.098 U	0.084 U	0.086 U	0.1 U	0.087 U	0.086 U	0.088 U	0.089 U
Bromomethane (Methyl bromide)	mg/kg	0.24 U	0.22 U	0.22 U	0.22 U	0.25 U	0.21 U	0.21 U	0.25 U	0.22 U	0.22 U	0.22 U	0.22 U
Carbon disulfide	mg/kg	0.24 U	0.22 U	0.22 U	0.22 U	0.25 U	0.21 U	0.21 U	0.25 U	0.22 U	0.22 U	0.22 U	0.22 U
Carbon tetrachloride	mg/kg	0.049 U	0.045 U	0.044 U	0.044 U	0.049 U	0.042 U	0.043 U	0.05 U	0.044 U	0.043 U	0.044 U	0.045 U
Chlorobenzene	mg/kg	0.049 U	0.045 U	0.044 U	0.044 U	0.049 U	0.042 U	0.043 U	0.05 U	0.044 U	0.043 U	0.044 U	0.045 U
Chloroethane	mg/kg	0.24 U	0.22 U	0.22 U	0.22 U	0.25 U	0.21 U	0.21 U	0.25 U	0.22 U	0.22 U	0.22 U	0.22 U
Chloroform (Trichloromethane)	mg/kg	0.049 U	0.045 U	0.044 U	0.044 U	0.049 U	0.042 U	0.043 U	0.05 U	0.044 U	0.043 U	0.044 U	0.045 U
Chloromethane (Methyl chloride)	mg/kg	0.24 U	0.22 U	0.22 U	0.22 U	0.25 U	0.21 U	0.21 U	0.25 U	0.22 U	0.22 U	0.22 U	0.22 U
cis-1,2-Dichloroethene	mg/kg	0.049 U	0.045 U	0.044 U	0.044 U	0.049 U	0.042 U	0.043 U	0.05 U	0.044 U	0.043 U	0.044 U	0.045 U
cis-1,3-Dichloropropene	mg/kg	0.049 U	0.045 U	0.044 U	0.044 U	0.049 U	0.042 U	0.043 U	0.05 U	0.044 U	0.043 U	0.044 U	0.045 U
Cyclohexane	mg/kg	1.2 U	1.1 U	1.1 U	1 U	1.2 U	1 U	1 U	1.2 U	1 U	1 U	1.1 U	1.1 U
Dibromochloromethane	mg/kg	0.049 U	0.045 U	0.044 U	0.044 U	0.049 U	0.042 U	0.043 U	0.05 U	0.044 U	0.043 U	0.044 U	0.045 U
Dichlorodifluoromethane (CFC-12)	mg/kg	0.097 U	0.09 U	0.088 U	0.087 U	0.098 U	0.084 U	0.086 U	0.1 U	0.087 U	0.086 U	0.088 U	0.089 U
Ethylbenzene	mg/kg	0.049 U	0.045 U	0.044 U	0.044 U	0.049 U	0.042 U	0.043 U	0.05 U	0.044 U	0.043 U	0.044 U	0.045 U
Isopropyl benzene	mg/kg	0.24 U	0.22 U	0.22 U	0.22 U	0.25 U	0.21 U	0.21 U	0.25 U	0.22 U	0.22 U	0.22 U	0.22 U
Methyl acetate	mg/kg	0.048 J	1.1 U	1.1 U	1 U	1.2 U	1 U	1 U	1.2 U	1 U	1 U	1.1 U	1.1 U
Methyl cyclohexane	mg/kg	1.2 U	1.1 U	1.1 U	1 U	1.2 U	1 U	1 U	1.2 U	1 U	1 U	1.1 U	1.1 U
Methyl tert butyl ether (MTBE)	mg/kg	0.24 U	0.22 U	0.22 U	0.22 U	0.25 U	0.21 U	0.21 U	0.25 U	0.22 U	0.22 U	0.22 U	0.22 U
Methylene chloride	mg/kg	0.24 U	0.22 U	0.22 U	0.22 U	0.25 U	0.21 U	0.21 U	0.25 U	0.22 U	0.22 U	0.22 U	0.22 U
Styrene	mg/kg	0.049 U	0.045 U	0.044 U	0.044 U	0.049 U	0.042 U	0.043 U	0.05 U	0.044 U	0.043 U	0.044 U	0.045 U
Tetrachloroethene	mg/kg	0.049 U	0.045 U	0.044 U	0.044 U	0.049 U	0.042 U	0.043 U	0.05 U	0.044 U	0.043 U	0.044 U	0.045 U
Toluene	mg/kg	0.097 U	0.09 U	0.088 U	0.087 U	0.098 U	0.084 U	0.086 U	0.1 U	0.087 U	0.086 U	0.088 U	0.089 U
trans-1,2-Dichloroethene	mg/kg	0.049 U	0.045 U	0.044 U	0.044 U	0.049 U	0.042 U	0.043 U	0.05 U	0.044 U	0.043 U	0.044 U	0.045 U
trans-1,3-Dichloropropene	mg/kg	0.049 U	0.045 U	0.044 U	0.044 U	0.049 U	0.042 U	0.043 U	0.05 U	0.044 U	0.043 U	0.044 U	0.045 U
Trichloroethene	mg/kg	0.049 U	0.045 U	0.044 U	0.044 U	0.049 U	0.042 U	0.043 U	0.05 U	0.044 U	0.043 U	0.044 U	0.045 U

TABLE 3.8

PART 201 CRITERIA EXCEEDANCES - SOIL
2013 RFI REPORT
FORMER GENERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation		*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*
Perimeter Status (1)		*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*
Sample Location		*CRA-704D*	*CRA-705M*	*CRA-705M*	*CRA-705M*	*CRA-706M*	*CRA-707SB*	*CRA-707SB*	*CRA-708SB*	*CRA-708SB*	*CRA-709M*	*CRA-709M*	*CRA-710M*
Sample Identification (SO-17358-)		*032612-DR-085*	*011812-DR-009*	*011812-DR-010*	*011812-DR-011*	*011812-DR-012*	*011812-DR-015*	*011812-DR-016*	*011812-DR-013*	*011812-DR-014*	*011712-DR-005*	*011712-DR-006*	*011812-DR-007*
Sample Date		*3/26/2012*	*1/18/2012*	*1/18/2012*	*1/18/2012*	*1/18/2012*	*1/18/2012*	*1/18/2012*	*1/18/2012*	*1/18/2012*	*1/17/2012*	*1/17/2012*	*1/18/2012*
Sample Depth		*(3-5) ft BGS*	*(0-2) ft BGS*	*(0-2) ft BGS*	*(2-3) ft BGS*	*(0-2) ft BGS*	*(0-2) ft BGS*	*(2-3) ft BGS*	*(0-2) ft BGS*	*(2-3) ft BGS*	*(0-2) ft BGS*	*(2-4) ft BGS*	*(0-2) ft BGS*
Sample Type				*Duplicate*									
	Units												
VOCs Continued													
Trichlorofluoromethane (CFC-11)	mg/kg	0.097 U	0.09 U	0.088 U	0.087 U	0.098 U	0.084 U	0.086 U	0.1 U	0.087 U	0.086 U	0.088 U	0.089 U
Trifluorotrichloroethane (Freon 113)	mg/kg	0.24 U	0.22 U	0.22 U	0.22 U	0.25 U	0.21 U	0.21 U	0.25 U	0.22 U	0.22 U	0.22 U	0.22 U
Vinyl chloride	mg/kg	0.039 U	0.036 U	0.035 U	0.035 U	0.039 U	0.034 U	0.034 U	0.04 U	0.035 U	0.034 U	0.035 U	0.036 U
Xylenes (total)	mg/kg	0.15 U	0.13 U	0.13 U	0.13 U	0.15 U	0.13 U	0.13 U	0.15 U	0.13 U	0.13 U	0.13 U	0.13 U
Semi-Volatile Organic Compounds (SVOCs)													
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	mg/kg	0.32 U	0.3 U	0.29 U	0.29 U	0.3 U	1.1 U	0.29 U	0.3 U	0.29 U	1.1 U	0.29 U	0.29 U
2,4,5-Trichlorophenol	mg/kg	0.32 U	0.3 U	0.29 U	0.29 U	0.3 U	1.1 U	0.29 U	0.3 U	0.29 U	1.1 U	0.29 U	0.29 U
2,4,6-Trichlorophenol	mg/kg	0.32 U	0.3 U	0.29 U	0.29 U	0.3 U	1.1 U	0.29 U	0.3 U	0.29 U	1.1 U	0.29 U	0.29 U
2,4-Dichlorophenol	mg/kg	0.32 U	0.3 U	0.29 U	0.29 U	0.3 U	1.1 U	0.29 U	0.3 U	0.29 U	1.1 U	0.29 U	0.29 U
2,4-Dimethylphenol	mg/kg	0.32 U	0.3 U	0.29 U	0.29 U	0.3 U	1.1 U	0.29 U	0.3 U	0.29 U	1.1 U	0.29 U	0.29 U
2,4-Dinitrophenol	mg/kg	0.18 U	0.17 U	0.17 U	0.16 U	0.17 U	0.63 U	0.16 U	0.17 U	0.17 U	0.65 U	0.17 U	0.17 U
2,4-Dinitrotoluene	mg/kg	0.32 U	0.3 U	0.29 U	0.29 U	0.3 U	1.1 U	0.29 U	0.3 U	0.29 U	1.1 U	0.29 U	0.29 U
2,6-Dinitrotoluene	mg/kg	0.32 U	0.3 U	0.29 U	0.29 U	0.3 U	1.1 U	0.29 U	0.3 U	0.29 U	1.1 U	0.29 U	0.29 U
2-Chloronaphthalene	mg/kg	0.32 U	0.3 U	0.29 U	0.29 U	0.3 U	1.1 U	0.29 U	0.3 U	0.29 U	1.1 U	0.29 U	0.29 U
2-Chlorophenol	mg/kg	0.32 U	0.3 U	0.29 U	0.29 U	0.3 U	1.1 U	0.29 U	0.3 U	0.29 U	1.1 U	0.29 U	0.29 U
2-Methylnaphthalene	mg/kg	0.32 U	0.3 U	0.29 U	0.29 U	0.3 U	1.1 U	0.29 U	0.3 U	0.29 U	1.1 U	0.29 U	0.29 U
2-Methylphenol	mg/kg	0.32 U	0.3 U	0.29 U	0.29 U	0.3 U	1.1 U	0.29 U	0.3 U	0.29 U	1.1 U	0.29 U	0.29 U
2-Nitroaniline	mg/kg	0.24 U	0.22 U	0.22 U	0.22 U	0.23 U	0.85 U	0.22 U	0.23 U	0.22 U	0.86 U	0.22 U	0.22 U
2-Nitrophenol	mg/kg	0.32 U	0.3 U	0.29 U	0.29 U	0.3 U	1.1 U	0.29 U	0.3 U	0.29 U	1.1 U	0.29 U	0.29 U
3&4-Methylphenol	mg/kg	0.32 U	0.3 U	0.29 U	0.29 U	0.3 U	1.1 U	0.29 U	0.3 U	0.29 U	1.1 U	0.29 U	0.29 U
3,3'-Dichlorobenzidine	mg/kg	1.9 U	1.8 U	1.8 U	1.7 U	1.8 U	6.8 U	1.7 U	1.8 U	1.8 U	6.9 U	1.8 U	1.8 U
3-Nitroaniline	mg/kg	0.24 U	0.22 U	0.22 U	0.22 U	0.23 U	0.85 U	0.22 U	0.23 U	0.22 U	0.86 U	0.22 U	0.22 U
4,6-Dinitro-2-methylphenol	mg/kg	0.18 U	0.17 U	0.17 U	0.16 U	0.17 U	0.63 U	0.16 U	0.17 U	0.17 U	0.65 U	0.17 U	0.17 U
4-Bromophenyl phenyl ether	mg/kg	0.32 U	0.3 U	0.29 U	0.29 U	0.3 U	1.1 U	0.29 U	0.3 U	0.29 U	1.1 U	0.29 U	0.29 U
4-Chloro-3-methylphenol	mg/kg	0.32 U	0.3 U	0.29 U	0.29 U	0.3 U	1.1 U	0.29 U	0.3 U	0.29 U	1.1 U	0.29 U	0.29 U
4-Chloroaniline	mg/kg	0.24 U	0.22 U	0.22 U	0.22 U	0.23 U	0.85 U	0.22 U	0.23 U	0.22 U	0.86 U	0.22 U	0.22 U
4-Chlorophenyl phenyl ether	mg/kg	0.32 U	0.3 U	0.29 U	0.29 U	0.3 U	1.1 U	0.29 U	0.3 U	0.29 U	1.1 U	0.29 U	0.29 U
4-Nitroaniline	mg/kg	0.24 U	0.22 U	0.22 U	0.22 U	0.23 U	0.85 U	0.22 U	0.23 U	0.22 U	0.86 U	0.22 U	0.22 U
4-Nitrophenol	mg/kg	0.4 U	0.37 U	0.37 U	0.36 U	0.37 U	1.4 U	0.36 U	0.38 U	0.37 U	1.4 U	0.37 U	0.37 U
Acenaphthene	mg/kg	0.32 U	0.3 U	0.29 U	0.29 U	0.3 U	1.1 U	0.29 U	0.3 U	0.29 U	1.1 U	0.29 U	0.29 U
Acenaphthylene	mg/kg	0.32 U	0.3 U	0.29 U	0.29 U	0.3 U	1.1 U	0.29 U	0.3 U	0.29 U	1.1 U	0.29 U	0.29 U
Acetophenone	mg/kg	0.32 U	0.3 U	0.29 U	0.29 U	0.3 U	1.1 U	0.29 U	0.3 U	0.29 U	1.1 U	0.29 U	0.29 U
Anthracene	mg/kg	0.32 U	0.3 U	0.29 U	0.29 U	0.3 U	1.1 U	0.29 U	0.3 U	0.29 U	1.1 U	0.29 U	0.29 U
Atrazine	mg/kg	0.048 U	0.045 U	0.044 U	0.043 U	0.045 U	0.17 U	0.044 U	0.046 U	0.045 U	0.17 U	0.044 U	0.045 U
Benzaldehyde	mg/kg	0.32 U	0.3 U	0.29 U	0.29 U	0.3 U	1.1 U	0.29 U	0.3 U	0.29 U	1.1 U	0.29 U	0.29 U
Benzo(a)anthracene	mg/kg	0.32 U	0.3 U	0.29 U	0.29 U	0.3 U	0.038 J	0.29 U	0.3 U	0.29 U	1.1 U	0.29 U	0.29 U
Benzo(a)pyrene	mg/kg	0.32 U	0.3 U	0.29 U	0.29 U	0.3 U	0.048 J	0.29 U	0.3 U	0.29 U	1.1 U	0.29 U	0.29 U
Benzo(b)fluoranthene	mg/kg	0.32 U	0.3 U	0.29 U	0.29 U	0.3 U	0.068 J	0.29 U	0.3 U	0.29 U	1.1 U	0.29 U	0.29 U
Benzo(g,h,i)perylene	mg/kg	0.32 U	0.3 U	0.29 U	0.29 U	0.3 U	1.1 U	0.29 U	0.3 U	0.29 U	1.1 U	0.29 U	0.29 U
Benzo(k)fluoranthene	mg/kg	0.32 U	0.3 U	0.29 U	0.29 U	0.3 U	1.1 U	0.29 U	0.3 U	0.29 U	1.1 U	0.29 U	0.29 U
Biphenyl (1,1-Biphenyl)	mg/kg	0.32 U	0.3 U	0.29 U	0.29 U	0.3 U	1.1 U	0.29 U	0.3 U	0.29 U	1.1 U	0.29 U	0.29 U
bis(2-Chloroethoxy)methane	mg/kg	0.32 U	0.3 U	0.29 U	0.29 U	0.3 U	1.1 U	0.29 U	0.3 U	0.29 U	1.1 U	0.29 U	0.29 U
bis(2-Chloroethyl)ether	mg/kg	0.096 U	0.09 U	0.089 U	0.087 U	0.09 U	0.34 U	0.087 U	0.092 U	0.089 U	0.34 U	0.089 U	0.089 U
bis(2-Ethylhexyl)phthalate (DEHP)	mg/kg	0.32 U	0.047 J	0.052 J	0.039 J	0.037 J	0.096 J	0.031 J	0.025 J	0.032 J	1.1 U	0.29 U	0.053 J

TABLE 3.8

PART 201 CRITERIA EXCEEDANCES - SOIL
2013 RFI REPORT
FORMER GENERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation		*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*
Perimeter Status (1)		*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*
Sample Location		*CRA-704D*	*CRA-705M*	*CRA-705M*	*CRA-705M*	*CRA-706M*	*CRA-707SB*	*CRA-707SB*	*CRA-708SB*	*CRA-708SB*	*CRA-709M*	*CRA-709M*	*CRA-710M*
Sample Identification (SO-17358-)		*032612-DR-085*	*011812-DR-009*	*011812-DR-010*	*011812-DR-011*	*011812-DR-012*	*011812-DR-015*	*011812-DR-016*	*011812-DR-013*	*011812-DR-014*	*011712-DR-005*	*011712-DR-006*	*011812-DR-007*
Sample Date		*3/26/2012*	*1/18/2012*	*1/18/2012*	*1/18/2012*	*1/18/2012*	*1/18/2012*	*1/18/2012*	*1/18/2012*	*1/18/2012*	*1/17/2012*	*1/17/2012*	*1/18/2012*
Sample Depth		*(3-5) ft BGS*	*(0-2) ft BGS*	*(0-2) ft BGS*	*(2-3) ft BGS*	*(0-2) ft BGS*	*(0-2) ft BGS*	*(2-3) ft BGS*	*(0-2) ft BGS*	*(2-3) ft BGS*	*(0-2) ft BGS*	*(2-4) ft BGS*	*(0-2) ft BGS*
Sample Type				*Duplicate*									
	Units												
SVOCs Continued													
Butyl benzylphthalate (BBP)	mg/kg	0.32 U	0.3 U	0.29 U	0.29 U	0.3 U	1.1 U	0.29 U	0.3 U	0.29 U	1.1 U	0.29 U	0.29 U
Caprolactam	mg/kg	0.32 U	0.3 U	0.29 U	0.29 U	0.3 U	1.1 U	0.29 U	0.3 U	0.29 U	1.1 U	0.29 U	0.29 U
Carbazole	mg/kg	0.32 U	0.3 U	0.29 U	0.29 U	0.3 U	1.1 U	0.29 U	0.3 U	0.29 U	1.1 U	0.29 U	0.29 U
Chrysene	mg/kg	0.32 U	0.3 U	0.29 U	0.29 U	0.3 U	0.049 J	0.29 U	0.3 U	0.29 U	1.1 U	0.29 U	0.29 U
Dibenz(a,h)anthracene	mg/kg	0.32 U	0.3 U	0.29 U	0.29 U	0.3 U	1.1 U	0.29 U	0.3 U	0.29 U	1.1 U	0.29 U	0.29 U
Dibenzofuran	mg/kg	0.32 U	0.3 U	0.29 U	0.29 U	0.3 U	1.1 U	0.29 U	0.3 U	0.29 U	1.1 U	0.29 U	0.29 U
Diethyl phthalate	mg/kg	0.32 U	0.3 U	0.29 U	0.29 U	0.3 U	1.1 U	0.29 U	0.3 U	0.29 U	1.1 U	0.29 U	0.29 U
Dimethyl phthalate	mg/kg	0.32 U	0.3 U	0.29 U	0.29 U	0.3 U	1.1 U	0.29 U	0.3 U	0.29 U	1.1 U	0.29 U	0.29 U
Di-n-butylphthalate (DBP)	mg/kg	0.32 U	0.3 U	0.29 U	0.29 U	0.3 U	1.1 U	0.29 U	0.3 U	0.29 U	1.1 U	0.29 U	0.29 U
Di-n-octyl phthalate (DnOP)	mg/kg	0.32 U	0.3 U	0.29 U	0.29 U	0.3 U	1.1 U	0.29 U	0.3 U	0.29 U	1.1 U	0.29 U	0.29 U
Fluoranthene	mg/kg	0.32 U	0.3 U	0.29 U	0.29 U	0.3 U	0.061 J	0.29 U	0.3 U	0.29 U	1.1 U	0.29 U	0.29 U
Fluorene	mg/kg	0.32 U	0.3 U	0.29 U	0.29 U	0.3 U	1.1 U	0.29 U	0.3 U	0.29 U	1.1 U	0.29 U	0.29 U
Hexachlorobenzene	mg/kg	0.32 U	0.3 U	0.29 U	0.29 U	0.3 U	1.1 U	0.29 U	0.3 U	0.29 U	1.1 U	0.29 U	0.29 U
Hexachlorobutadiene	mg/kg	0.048 U	0.045 U	0.044 U	0.043 U	0.045 U	0.17 U	0.044 U	0.046 U	0.045 U	0.17 U	0.044 U	0.045 U
Hexachlorocyclopentadiene	mg/kg	0.32 U	0.3 U	0.29 U	0.29 U	0.3 U	1.1 U	0.29 U	0.3 U	0.29 U	1.1 U	0.29 U	0.29 U
Hexachloroethane	mg/kg	0.32 U	0.3 U	0.29 U	0.29 U	0.3 U	1.1 U	0.29 U	0.3 U	0.29 U	1.1 U	0.29 U	0.29 U
Indeno(1,2,3-cd)pyrene	mg/kg	0.32 U	0.3 U	0.29 U	0.29 U	0.3 U	1.1 U	0.29 U	0.3 U	0.29 U	1.1 U	0.29 U	0.29 U
Isophorone	mg/kg	0.32 U	0.3 U	0.29 U	0.29 U	0.3 U	1.1 U	0.29 U	0.3 U	0.29 U	1.1 U	0.29 U	0.29 U
Naphthalene	mg/kg	0.32 U	0.3 U	0.29 U	0.29 U	0.3 U	1.1 U	0.29 U	0.3 U	0.29 U	1.1 U	0.29 U	0.29 U
Nitrobenzene	mg/kg	0.32 U	0.3 U	0.29 U	0.29 U	0.3 U	1.1 U	0.29 U	0.3 U	0.29 U	1.1 U	0.29 U	0.29 U
N-Nitrosodi-n-propylamine	mg/kg	0.32 U	0.3 U	0.29 U	0.29 U	0.3 U	1.1 U	0.29 U	0.3 U	0.29 U	1.1 U	0.29 U	0.29 U
N-Nitrosodiphenylamine	mg/kg	0.32 U	0.3 U	0.29 U	0.29 U	0.3 U	1.1 U	0.29 U	0.3 U	0.29 U	1.1 U	0.29 U	0.29 U
Pentachlorophenol	mg/kg	0.18 U	0.17 U	0.17 U	0.16 U	0.17 U	0.63 U	0.16 U	0.17 U	0.17 U	0.65 U	0.17 U	0.17 U
Phenanthrene	mg/kg	0.32 U	0.3 U	0.0083 J	0.29 U	0.3 U	1.1 U	0.29 U	0.3 U	0.29 U	1.1 U	0.29 U	0.29 U
Phenol	mg/kg	0.32 U	0.3 U	0.29 U	0.29 U	0.3 U	1.1 U	0.29 U	0.3 U	0.29 U	1.1 U	0.29 U	0.29 U
Pyrene	mg/kg	0.0082 J	0.3 U	0.0077 J	0.29 U	0.3 U	0.072 J	0.29 U	0.3 U	0.29 U	1.1 U	0.29 U	0.29 U
Metals													
Aluminum	mg/kg	1900	4400	4300	2400	3300	4300	3200	6600	2700	2700	4600	4900
Antimony	mg/kg	0.03 J	0.057 J	0.048 J	0.045 J	0.067 J	0.21 J	0.081 J	0.042 J	0.046 J	0.18 J	0.031 J	0.066 J
Arsenic	mg/kg	1.8	4.9	5.3	3.4	4.2	4.5	**8.7**[bcdp]	**6.8**[bcd]	**5.9**[bcd]	**5.9**[bcd]	4.1	**6.2**[bcd]
Barium	mg/kg	7.1	17	16	6.9	13	31	12	72	29	19	20	41
Beryllium	mg/kg	0.12 J	0.12 J	0.054 J	0.16 U	0.17 U	0.07 J	0.066 J	0.22	0.16 U	0.071 J	0.17 U	0.13 J
Cadmium	mg/kg	0.089 U	0.049 J	0.046 J	0.042 J	0.084 J	0.69	0.081 U	0.36	0.064 J	0.082	0.085 U	0.11
Calcium	mg/kg	-	52000 J	38000 J	95000 J	6900 J	-	-	-	-	-	-	-
Chromium	mg/kg	4.3	8.7	9.8	8.2	7.9	14	8.6	12	5.8	6.3	9.3	9.2
Chromium III (trivalent)	mg/kg	4.3	8	9.3	8.2	-	13	7.9	-	-	5.5	8.9	8.3
Chromium VI (hexavalent)	mg/kg	0.96 UJ	0.63 J	0.42 J	0.87 U	-	1.9	0.75 J	-	-	0.76 J	0.38 J	0.9
Cobalt	mg/kg	1.6	2.8	3.1	2.3	2.9	3.9	3.2	6.3	2.4	2.2	3	3.6
Copper	mg/kg	4	9.6	10	8	6.8	26	9.3	7.8	5.8	8.8	4.4	8
Iron	mg/kg	3800	9300	10000	6600	9400	**13000**[bc]	**14000**[bc]	**15000**[bc]	9900	7100	10000	11000
Lead	mg/kg	2.5	5.1	5.8	3.5	5.4	26	6	7.6	2.7	6.1	5.8	6.7
Lead - coarse fraction	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-
Lead - fine fraction	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-
Lead - total (calculated by fine/coarse fraction)	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-
Magnesium	mg/kg	-	**14000**[b]	**10000**[b]	**14000**[b]	2200	-	-	-	-	-	-	-

TABLE 3.8

PART 201 CRITERIA EXCEEDANCES - SOIL
2013 RFI REPORT
FORMER GENERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation		*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*
Perimeter Status (1)		*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*
Sample Location		*CRA-704D*	*CRA-705M*	*CRA-705M*	*CRA-705M*	*CRA-706M*	*CRA-707SB*	*CRA-707SB*	*CRA-708SB*	*CRA-708SB*	*CRA-709M*	*CRA-709M*	*CRA-710M*
Sample Identification (SO-17358-)		*032612-DR-085*	*011812-DR-009*	*011812-DR-010*	*011812-DR-011*	*011812-DR-012*	*011812-DR-015*	*011812-DR-016*	*011812-DR-013*	*011812-DR-014*	*011712-DR-005*	*011712-DR-006*	*011812-DR-007*
Sample Date		*3/26/2012*	*1/18/2012*	*1/18/2012*	*1/18/2012*	*1/18/2012*	*1/18/2012*	*1/18/2012*	*1/18/2012*	*1/18/2012*	*1/17/2012*	*1/17/2012*	*1/18/2012*
Sample Depth		*(3-5) ft BGS*	*(0-2) ft BGS*	*(0-2) ft BGS*	*(2-3) ft BGS*	*(0-2) ft BGS*	*(0-2) ft BGS*	*(2-3) ft BGS*	*(0-2) ft BGS*	*(2-3) ft BGS*	*(0-2) ft BGS*	*(2-4) ft BGS*	*(0-2) ft BGS*
Sample Type				*Duplicate*									
	Units												
Metals Continued													
Manganese	mg/kg	79 J	230 J	220 J	180 J	110 J	330 J	160 J	**600 J[bcd]**	440 J	220 J	95 J	360 J
Mercury	mg/kg	0.049 U	0.015 J	0.044 U	0.039 U	0.044 U	0.027 J	0.037 U	0.042	0.04 U	0.026 J	0.016 J	0.024 J
Nickel	mg/kg	5.4	9.4	9.9	7.2	8.2	13	7.8	11	10	6.5	7.5	8.3
Potassium	mg/kg	-	430 J	360	350 J	260 J	-	-	-	-	-	-	-
Selenium	mg/kg	0.22 J	**0.67[d]**	**0.59[d]**	0.37	**0.52[d]**	**0.47[d]**	**0.54[d]**	**1.1[d]**	0.4	**0.44[d]**	**0.62[d]**	**0.71[d]**
Silver	mg/kg	0.089 U	0.089 U	0.065 U	0.08 U	0.087 U	0.022 J	0.081 U	0.025 J	0.081 U	0.022 J	0.085 U	0.018 J
Sodium	mg/kg	-	89 U	65 U	80 U	87 U	-	-	-	-	-	-	-
Thallium	mg/kg	0.089 U	0.13	0.11	0.079 J	0.12	0.1	0.07 J	0.1	0.091	0.074	0.095	0.082
Vanadium	mg/kg	5.6	12	13	8.5	13	13	17	19	8.8	9	14	14
Zinc	mg/kg	14	26	24	19	22	47	27	32	14	18	32	27
Polychlorinated biphenyls (PCBs)													
Aroclor-1016 (PCB-1016)	mg/kg	0.039 U	0.037 U	0.037 U	0.036 U	0.037 U	0.035 U	0.036 U	0.038 U	0.037 U	0.036 U	0.036 U	0.037 U
Aroclor-1221 (PCB-1221)	mg/kg	0.039 U	0.037 U	0.037 U	0.036 U	0.037 U	0.035 U	0.036 U	0.038 U	0.037 U	0.036 U	0.036 U	0.037 U
Aroclor-1232 (PCB-1232)	mg/kg	0.039 U	0.037 U	0.037 U	0.036 U	0.037 U	0.035 U	0.036 U	0.038 U	0.037 U	0.036 U	0.036 U	0.037 U
Aroclor-1242 (PCB-1242)	mg/kg	0.039 U	0.037 U	0.037 U	0.036 U	0.037 U	0.035 U	0.036 U	0.038 U	0.037 U	0.036 U	0.036 U	0.037 U
Aroclor-1248 (PCB-1248)	mg/kg	0.039 U	0.037 U	0.037 U	0.036 U	0.037 U	0.035 U	0.036 U	0.038 U	0.037 U	0.036 U	0.036 U	0.037 U
Aroclor-1254 (PCB-1254)	mg/kg	0.039 U	0.037 U	0.037 U	0.036 U	0.037 U	0.035 U	0.036 U	0.038 U	0.037 U	0.036 U	0.036 U	0.037 U
Aroclor-1260 (PCB-1260)	mg/kg	0.039 U	0.037 U	0.037 U	0.036 U	0.037 U	0.035 U	0.036 U	0.038 U	0.037 U	0.036 U	0.036 U	0.037 U
Aroclor-1262 (PCB-1262)	mg/kg	0.039 U	-	-	-	-	-	-	-	-	-	-	-
Aroclor-1268 (PCB-1268)	mg/kg	0.039 U	-	-	-	-	-	-	-	-	-	-	-
Total PCBs	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Notes

Michigan Part 201 generic clean up criteria (updated September 28, 2012)

ID - Insufficient data to develop criterion

NLV - Hazardous substance is not likely to volatilize under most conditions

NA - Criterion or value is not available

Perimeter Status (1) - N - non-perimeter, Y - perimeter

mg/kg - milligram/kilogram

Notes:

U - Not detected at the associated reporting limit.

J - Estimated concentration.

UJ - Not detected; associated reporting limit is estimated.

R - Rejected

TABLE 3.8

PART 201 CRITERIA EXCEEDANCES - SOIL
2013 RFI REPORT
FORMER GENERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation		*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*WEST01*	*WEST01*	*WEST01*	*WEST01*	*WEST01*	*WEST01*	*WEST01*	*WEST01*
Perimeter Status (1)		*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*
Sample Location		*CRA-710M*	*CRA-833M*	*CRA-833M*	*CRA-834M*	*CRA-834M*	*CRA-835SB*	*CRA-835SB*	*CRA-713M*	*CRA-713M*	*CRA-720I*	*CRA-720I*	*CRA-786SB*	*CRA-786SB*	*CRA-812SB*	*CRA-812SB*
Sample Identification (SO-17358-)		*011812-DR-008*	*011912-DR-021*	*011912-DR-022*	*011812-DR-017*	*011812-DR-018*	*011912-DR-019*	*011912-DR-020*	*031512-CB-201*	*031512-CB-202*	*031312-DR-066*	*031312-DR-067*	*031512-CB-199*	*031512-CB-200*	*031212-CB-187*	*031212-CB-188*
Sample Date		*1/18/2012*	*1/19/2012*	*1/19/2012*	*1/18/2012*	*1/18/2012*	*1/19/2012*	*1/19/2012*	*3/15/2012*	*3/15/2012*	*3/13/2012*	*3/13/2012*	*3/15/2012*	*3/15/2012*	*3/12/2012*	*3/12/2012*
Sample Depth		*(2-4) ft BGS*	*(0-2) ft BGS*	*(3-5) ft BGS*	*(0-2) ft BGS*	*(3-5) ft BGS*	*(0-2) ft BGS*	*(2-4) ft BGS*	*(0-2) ft BGS*	*(6-8) ft BGS*	*(0-2) ft BGS*	*(8-10) ft BGS*	*(1.5-3.5) ft BGS*	*(3.5-5.5) ft BGS*	*(1-3) ft BGS*	*(6-8) ft BGS*
Sample Type																
	Units															
Volatile Organic Compounds (VOCs)																
1,1,1-Trichloroethane	mg/kg	0.043 U	0.048 U	0.043 U	0.045 U	0.04 U	0.045 U	0.045 U	0.039 U	0.043 U	0.04 U	0.041 U	0.043 U	0.047 U	0.041 U	0.044 U
1,1,2,2-Tetrachloroethane	mg/kg	0.043 U	0.048 U	0.043 U	0.045 U	0.04 U	0.045 U	0.045 U	0.039 U	0.043 U	0.04 U	0.041 U	0.043 U	0.047 U	0.041 U	0.044 U
1,1,2-Trichloroethane	mg/kg	0.043 U	0.048 U	0.043 U	0.045 U	0.04 U	0.045 U	0.045 U	0.039 U	0.043 U	0.04 U	0.041 U	0.043 U	0.047 U	0.041 U	0.044 U
1,1-Dichloroethane	mg/kg	0.043 U	0.048 U	0.043 U	0.045 U	0.04 U	0.045 U	0.045 U	0.039 U	0.043 U	0.04 U	0.041 U	0.043 U	0.047 U	0.041 U	0.044 U
1,1-Dichloroethene	mg/kg	0.043 U	0.048 U	0.043 U	0.045 U	0.04 U	0.045 U	0.045 U	0.039 U	0.043 U	0.04 U	0.041 U	0.043 U	0.047 U	0.041 U	0.044 U
1,2,4-Trichlorobenzene	mg/kg	0.21 U	0.014 J	0.21 U	0.22 U	0.2 U	0.23 U	0.22 U	0.2 U	0.22 U	0.2 U	0.21 U	0.22 U	0.24 U	0.21 U	0.22 U
1,2-Dibromo-3-chloropropane (DBCP)	mg/kg	0.21 U	0.24 U	0.21 U	0.22 U	0.2 U	0.23 U	0.22 U	0.2 U	0.22 U	0.2 U	0.21 U	0.22 U	0.24 U	0.21 U	0.22 U
1,2-Dibromoethane (Ethylene dibromide)	mg/kg	0.21 U	0.24 U	0.21 U	0.22 U	0.2 U	0.23 U	0.22 U	0.2 U	0.22 U	0.2 U	0.21 U	0.22 U	0.24 U	0.21 U	0.22 U
1,2-Dichlorobenzene	mg/kg	0.086 U	0.095 U	0.085 U	0.089 U	0.08 U	0.091 U	0.089 U	0.079 U	0.086 U	0.081 U	0.083 U	0.086 U	0.094 U	0.082 U	0.087 U
1,2-Dichloroethane	mg/kg	0.043 U	0.048 U	0.043 U	0.045 U	0.04 U	0.045 U	0.045 U	0.039 U	0.043 U	0.04 U	0.041 U	0.043 U	0.047 U	0.041 U	0.044 U
1,2-Dichloropropane	mg/kg	0.043 U	0.048 U	0.043 U	0.045 U	0.04 U	0.045 U	0.045 U	0.039 U	0.043 U	0.04 U	0.041 U	0.043 U	0.047 U	0.041 U	0.044 U
1,3-Dichlorobenzene	mg/kg	0.086 U	0.095 U	0.085 U	0.089 U	0.08 U	0.091 U	0.089 U	0.079 U	0.086 U	0.081 U	0.083 U	0.086 U	0.094 U	0.082 U	0.087 U
1,4-Dichlorobenzene	mg/kg	0.086 U	0.095 U	0.085 U	0.089 U	0.08 U	0.091 U	0.089 U	0.079 U	0.086 U	0.081 U	0.083 U	0.086 U	0.094 U	0.082 U	0.087 U
2-Butanone (Methyl ethyl ketone) (MEK)	mg/kg	0.64 U	0.71 U	0.64 U	0.67 U	0.6 U	0.68 U	0.67 U	0.59 U	0.65 U	0.61 U	0.62 U	0.65 U	0.71 U	0.62 U	0.65 U
2-Hexanone	mg/kg	2.1 U	2.4 U	2.1 U	2.2 U	2 U	2.3 U	2.2 U	2 U	2.2 U	2 U	2.1 U	2.2 U	2.4 U	2.1 U	2.2 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	mg/kg	2.1 U	2.4 U	2.1 U	2.2 U	2 U	2.3 U	2.2 U	2 U	2.2 U	2 U	2.1 U	2.2 U	2.4 U	2.1 U	2.2 U
Acetone	mg/kg	0.64 U	0.71 U	0.64 U	0.67 U	0.6 U	0.68 U	0.67 U	0.59 U	0.65 U	0.61 U	0.62 U	0.65 U	0.71 U	0.62 U	0.65 U
Benzene	mg/kg	0.043 U	0.048 U	0.043 U	0.045 U	0.04 U	0.045 U	0.045 U	0.039 U	0.043 U	0.04 U	0.041 U	0.043 U	0.047 U	0.041 U	0.039 J
Bromodichloromethane	mg/kg	0.086 U	0.095 U	0.085 U	0.089 U	0.08 U	0.091 U	0.089 U	0.079 U	0.086 U	0.081 U	0.083 U	0.086 U	0.094 U	0.082 U	0.087 U
Bromoform	mg/kg	0.086 U	0.095 U	0.085 U	0.089 U	0.08 U	0.091 U	0.089 U	0.079 U	0.086 U	0.081 U	0.083 U	0.086 U	0.094 U	0.082 U	0.087 U
Bromomethane (Methyl bromide)	mg/kg	0.21 U	0.24 U	0.21 U	0.22 U	0.2 U	0.23 U	0.22 U	0.2 U	0.22 U	0.2 U	0.21 U	0.22 U	0.24 U	0.21 U	0.22 U
Carbon disulfide	mg/kg	0.21 U	0.24 U	0.21 U	0.22 U	0.2 U	0.23 U	0.22 U	0.2 U	0.22 U	0.2 U	0.21 U	0.22 U	0.24 U	0.21 U	0.22 U
Carbon tetrachloride	mg/kg	0.043 U	0.048 U	0.043 U	0.045 U	0.04 U	0.045 U	0.045 U	0.039 U	0.043 U	0.04 U	0.041 U	0.043 U	0.047 U	0.041 U	0.044 U
Chlorobenzene	mg/kg	0.043 U	0.048 U	0.043 U	0.045 U	0.04 U	0.045 U	0.045 U	0.039 U	0.043 U	0.04 U	0.041 U	0.043 U	0.047 U	0.041 U	0.044 U
Chloroethane	mg/kg	0.21 U	0.24 U	0.21 U	0.22 U	0.2 U	0.23 U	0.22 U	0.2 U	0.22 U	0.2 U	0.21 U	0.22 U	0.24 U	0.21 U	0.22 U
Chloroform (Trichloromethane)	mg/kg	0.043 U	0.048 U	0.043 U	0.045 U	0.04 U	0.045 U	0.045 U	0.039 U	0.043 U	0.04 U	0.041 U	0.043 U	0.047 U	0.041 U	0.044 U
Chloromethane (Methyl chloride)	mg/kg	0.21 U	0.24 U	0.21 U	0.22 U	0.2 U	0.23 U	0.22 U	0.2 U	0.22 U	0.2 U	0.21 U	0.22 U	0.24 U	0.21 U	0.22 U
cis-1,2-Dichloroethene	mg/kg	0.043 U	0.048 U	0.043 U	0.045 U	0.04 U	0.045 U	0.045 U	0.039 U	0.043 U	0.04 U	0.041 U	0.043 U	0.047 U	0.041 U	0.044 U
cis-1,3-Dichloropropene	mg/kg	0.043 U	0.048 U	0.043 U	0.045 U	0.04 U	0.045 U	0.045 U	0.039 U	0.043 U	0.04 U	0.041 U	0.043 U	0.047 U	0.041 U	0.044 U
Cyclohexane	mg/kg	1 U	1.1 U	1 U	1.1 U	0.96 U	1.1 U	1.1 U	0.94 U	1 U	0.97 U	0.99 U	1 U	1.1 U	0.98 U	0.65 J
Dibromochloromethane	mg/kg	0.043 U	0.048 U	0.043 U	0.045 U	0.04 U	0.045 U	0.045 U	0.039 U	0.043 U	0.04 U	0.041 U	0.043 U	0.047 U	0.041 U	0.044 U
Dichlorodifluoromethane (CFC-12)	mg/kg	0.086 U	0.095 U	0.085 U	0.089 U	0.08 U	0.091 U	0.089 U	0.079 U	0.086 U	0.081 U	0.083 U	0.086 U	0.094 U	0.082 U	0.087 U
Ethylbenzene	mg/kg	0.043 U	0.048 U	0.043 U	0.045 U	0.04 U	0.045 U	0.045 U	0.039 U	0.043 U	0.04 U	0.041 U	0.043 U	0.047 U	0.041 U	0.007 J
Isopropyl benzene	mg/kg	0.21 U	0.24 U	0.21 U	0.22 U	0.2 U	0.23 U	0.22 U	0.2 U	0.22 U	0.2 U	0.21 U	0.22 U	0.24 U	0.21 U	0.065 J
Methyl acetate	mg/kg	1 U	1.1 U	0.42 J	0.089 J	0.96 U	1.1 U	1.1 U	0.94 U	1 U	0.97 U	0.99 U	1 U	0.24 J	0.98 U	1 U
Methyl cyclohexane	mg/kg	1 U	1.1 U	1 U	1.1 U	0.96 U	1.1 U	1.1 U	0.94 U	1 U	0.97 U	0.99 U	1 U	1.1 U	0.98 U	1
Methyl tert butyl ether (MTBE)	mg/kg	0.21 U	0.24 U	0.21 U	0.22 U	0.2 U	0.23 U	0.22 U	0.2 U	0.22 U	0.2 U	0.21 U	0.22 U	0.24 U	0.21 U	0.22 U
Methylene chloride	mg/kg	0.21 U	0.24 U	0.21 U	0.22 U	0.2 U	0.23 U	0.22 U	0.2 U	0.22 U	0.2 U	0.21 U	0.22 U	0.24 U	0.21 U	0.22 U
Styrene	mg/kg	0.043 U	0.048 U	0.043 U	0.045 U	0.04 U	0.045 U	0.045 U	0.039 U	0.043 U	0.04 U	0.041 U	0.043 U	0.047 U	0.041 U	0.044 U
Tetrachloroethene	mg/kg	0.043 U	0.048 U	0.043 U	0.045 U	0.04 U	0.045 U	0.045 U	0.039 U	0.043 U	0.04 U	0.041 U	0.043 U	0.047 U	0.041 U	0.044 U
Toluene	mg/kg	0.086 U	0.095 U	0.085 U	0.089 U	0.08 U	0.091 U	0.089 U	0.079 U	0.086 U	0.081 U	0.083 U	0.086 U	0.094 U	0.082 U	0.02 J
trans-1,2-Dichloroethene	mg/kg	0.043 U	0.048 U	0.043 U	0.045 U	0.04 U	0.045 U	0.045 U	0.039 U	0.043 U	0.04 U	0.041 U	0.043 U	0.047 U	0.041 U	0.044 U
trans-1,3-Dichloropropene	mg/kg	0.043 U	0.048 U	0.043 U	0.045 U	0.04 U	0.045 U	0.045 U	0.039 U	0.043 U	0.04 U	0.041 U	0.043 U	0.047 U	0.041 U	0.044 U
Trichloroethene	mg/kg	0.043 U	0.048 U	0.043 U	0.045 U	0.04 U	0.045 U	0.045 U	0.039 U	0.043 U	0.04 U	0.041 U	0.043 U	0.047 U	0.041 U	0.044 U

TABLE 3.8

PART 201 CRITERIA EXCEEDANCES - SOIL
2013 RFI REPORT
FORMER GENERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation		*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*WEST01*	*WEST01*	*WEST01*	*WEST01*	*WEST01*	*WEST01*	*WEST01*	*WEST01*
Perimeter Status (1)		*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*
Sample Location		*CRA-710M*	*CRA-833M*	*CRA-833M*	*CRA-834M*	*CRA-834M*	*CRA-835SB*	*CRA-835SB*	*CRA-713M*	*CRA-713M*	*CRA-720I*	*CRA-720I*	*CRA-786SB*	*CRA-786SB*	*CRA-812SB*	*CRA-812SB*
Sample Identification (SO-17358-)		*011812-DR-008*	*011912-DR-021*	*011912-DR-022*	*011812-DR-017*	*011812-DR-018*	*011912-DR-019*	*011912-DR-020*	*031512-CB-201*	*031512-CB-202*	*031312-DR-066*	*031312-DR-067*	*031512-CB-199*	*031512-CB-200*	*031212-CB-187*	*031212-CB-188*
Sample Date		*1/18/2012*	*1/19/2012*	*1/19/2012*	*1/18/2012*	*1/18/2012*	*1/19/2012*	*1/19/2012*	*3/15/2012*	*3/15/2012*	*3/13/2012*	*3/13/2012*	*3/15/2012*	*3/15/2012*	*3/12/2012*	*3/12/2012*
Sample Depth		*(2-4) ft BGS*	*(0-2) ft BGS*	*(3-5) ft BGS*	*(0-2) ft BGS*	*(3-5) ft BGS*	*(0-2) ft BGS*	*(2-4) ft BGS*	*(0-2) ft BGS*	*(6-8) ft BGS*	*(0-2) ft BGS*	*(8-10) ft BGS*	*(1.5-3.5) ft BGS*	*(3.5-5.5) ft BGS*	*(1-3) ft BGS*	*(6-8) ft BGS*
Sample Type																
	Units															
VOCs Continued																
Trichlorofluoromethane (CFC-11)	mg/kg	0.086 U	0.095 U	0.085 U	0.089 U	0.08 U	0.091 U	0.089 U	0.079 U	0.086 U	0.081 U	0.083 U	0.086 U	0.094 U	0.082 U	0.087 U
Trifluorotrichloroethane (Freon 113)	mg/kg	0.21 U	0.24 U	0.21 U	0.22 U	0.2 U	0.23 U	0.22 U	0.2 U	0.22 U	0.2 U	0.21 U	0.22 U	0.24 U	0.21 U	0.22 U
Vinyl chloride	mg/kg	0.034 U	0.038 U	0.034 U	0.036 U	0.032 U	0.036 U	0.036 U	0.031 U	0.035 U	0.032 U	0.033 U	0.035 U	0.038 U	0.033 U	0.035 U
Xylenes (total)	mg/kg	0.13 U	0.14 U	0.13 U	0.13 U	0.12 U	0.14 U	0.13 U	0.12 U	0.13 U	0.12 U	0.12 U	0.13 U	0.14 U	0.12 U	0.27
Semi-Volatile Organic Compounds (SVOCs)																
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	mg/kg	0.3 U	0.29 U	0.31 U	0.74 U	0.28 U	0.73 U	0.29 U	0.29 U	0.29 U	0.29 U	0.29 U	0.28 U	0.31 U	0.28 U	0.27 U
2,4,5-Trichlorophenol	mg/kg	0.3 U	0.29 U	0.31 U	0.74 U	0.28 U	0.73 U	0.29 U	0.29 U	0.29 U	0.29 U	0.29 U	0.28 U	0.31 U	0.28 U	0.27 U
2,4,6-Trichlorophenol	mg/kg	0.3 U	0.29 U	0.31 U	0.74 U	0.28 U	0.73 U	0.29 U	0.29 U	0.29 U	0.29 U	0.29 U	0.28 U	0.31 U	0.28 U	0.27 U
2,4-Dichlorophenol	mg/kg	0.3 U	0.29 U	0.31 U	0.74 U	0.28 U	0.73 U	0.29 U	0.29 U	0.29 U	0.29 U	0.29 U	0.28 U	0.31 U	0.28 U	0.27 U
2,4-Dimethylphenol	mg/kg	0.3 U	0.29 U	0.31 U	0.74 U	0.28 U	0.73 U	0.29 U	0.29 U	0.29 U	0.29 U	0.29 U	0.28 U	0.31 U	0.28 U	0.27 U
2,4-Dinitrophenol	mg/kg	0.17 U	0.16 U	0.17 U	0.42 U	0.16 U	0.41 U	0.17 U	0.16 U	0.16 U	0.17 U	0.16 U	0.16 U	R	0.16 U	0.15 U
2,4-Dinitrotoluene	mg/kg	0.3 U	0.29 U	0.31 U	0.74 U	0.28 U	0.73 U	0.29 U	0.29 U	0.29 U	0.29 U	0.29 U	0.28 U	0.31 U	0.28 U	0.27 U
2,6-Dinitrotoluene	mg/kg	0.3 U	0.29 U	0.31 U	0.74 U	0.28 U	0.73 U	0.29 U	0.29 U	0.29 U	0.29 U	0.29 U	0.28 U	0.31 U	0.28 U	0.27 U
2-Chloronaphthalene	mg/kg	0.3 U	0.29 U	0.31 U	0.74 U	0.28 U	0.73 U	0.29 U	0.29 U	0.29 U	0.29 U	0.29 U	0.28 U	0.31 U	0.28 U	0.27 U
2-Chlorophenol	mg/kg	0.3 U	0.29 U	0.31 U	0.74 U	0.28 U	0.73 U	0.29 U	0.29 U	0.29 U	0.29 U	0.29 U	0.28 U	0.31 U	0.28 U	0.27 U
2-Methylnaphthalene	mg/kg	0.3 U	0.29 U	0.31 U	0.042 J	0.28 U	0.73 U	0.29 U	0.0048 J	0.29 U	0.29 U	0.29 U	0.28 U	0.31 U	0.022 J	0.096 J
2-Methylphenol	mg/kg	0.3 U	0.29 U	0.31 U	0.74 U	0.28 U	0.73 U	0.29 U	0.29 U	0.29 U	0.29 U	0.29 U	0.28 U	0.31 U	0.28 U	0.27 U
2-Nitroaniline	mg/kg	0.22 U	0.22 U	0.23 U	0.56 U	0.21 U	0.55 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.24 U	0.21 U	0.21 U
2-Nitrophenol	mg/kg	0.3 U	0.29 U	0.31 U	0.74 U	0.28 U	0.73 U	0.29 U	0.29 U	0.29 U	0.29 U	0.29 U	0.28 U	0.31 U	0.28 U	0.27 U
3&4-Methylphenol	mg/kg	0.3 U	0.29 U	0.31 U	0.74 U	0.28 U	0.73 U	0.29 U	0.29 U	0.29 U	0.29 U	0.29 U	0.28 U	0.31 U	0.28 U	0.27 U
3,3'-Dichlorobenzidine	mg/kg	1.8 U	1.7 U	1.9 U	4.5 U	1.7 U	4.4 U	1.8 U	1.7 U	1.7 U	1.8 U	1.8 U	1.7 U	R	1.7 U	1.6 U
3-Nitroaniline	mg/kg	0.22 U	0.22 U	0.23 U	0.56 U	0.21 U	0.55 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.24 U	0.21 U	0.21 U
4,6-Dinitro-2-methylphenol	mg/kg	0.17 U	0.16 U	0.17 U	0.42 U	0.16 U	0.41 U	0.17 U	0.16 U	0.16 U	0.17 U	0.16 U	0.16 U	0.18 U	0.16 U	0.15 U
4-Bromophenyl phenyl ether	mg/kg	0.3 U	0.29 U	0.31 U	0.74 U	0.28 U	0.73 U	0.29 U	0.29 U	0.29 U	0.29 U	0.29 U	0.28 U	0.31 U	0.28 U	0.27 U
4-Chloro-3-methylphenol	mg/kg	0.3 U	0.29 U	0.31 U	0.74 U	0.28 U	0.73 U	0.29 U	0.29 U	0.29 U	0.29 U	0.29 U	0.28 U	0.31 U	0.28 U	0.27 U
4-Chloroaniline	mg/kg	0.22 U	0.22 U	0.23 U	0.56 U	0.21 U	0.55 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.24 U	0.21 U	0.21 U
4-Chlorophenyl phenyl ether	mg/kg	0.3 U	0.29 U	0.31 U	0.74 U	0.28 U	0.73 U	0.29 U	0.29 U	0.29 U	0.29 U	0.29 U	0.28 U	0.31 U	0.28 U	0.27 U
4-Nitroaniline	mg/kg	0.22 U	0.22 U	0.23 U	0.56 U	0.21 U	0.55 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.24 U	0.21 U	0.21 U
4-Nitrophenol	mg/kg	0.37 U	0.36 U	0.38 U	0.92 U	0.35 U	0.91 U	0.37 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.39 U	0.35 U	0.34 U
Acenaphthene	mg/kg	0.3 U	0.29 U	0.31 U	0.043 J	0.28 U	0.73 U	0.29 U	0.29 U	0.29 U	0.29 U	0.29 U	0.28 U	0.31 U	0.016 J	0.68
Acenaphthylene	mg/kg	0.3 U	0.29 U	0.31 U	0.74 U	0.28 U	0.73 U	0.29 U	0.29 U	0.29 U	0.29 U	0.29 U	0.28 U	0.31 U	0.28 U	0.012 J
Acetophenone	mg/kg	0.3 U	0.29 U	0.31 U	0.74 U	0.28 U	0.73 U	0.29 U	0.29 U	0.29 U	0.29 U	0.29 U	0.28 U	0.31 UJ	0.28 U	0.27 U
Anthracene	mg/kg	0.3 U	0.29 U	0.31 U	0.13 J	0.28 U	0.73 U	0.29 U	0.29 U	0.29 U	0.29 U	0.29 U	0.28 U	0.31 U	0.0093 J	0.64
Atrazine	mg/kg	0.045 U	0.043 U	0.046 U	0.11 U	0.043 U	0.11 U	0.044 U	0.043 U	0.044 U	0.044 U	0.044 U	0.043 U	0.047 U	0.043 U	0.041 U
Benzaldehyde	mg/kg	0.3 U	0.29 U	0.31 U	0.74 U	0.28 U	0.73 U	0.29 U	0.29 U	0.29 U	0.29 U	0.29 U	0.28 U	0.31 U	0.28 U	0.27 U
Benzo(a)anthracene	mg/kg	0.3 U	0.024 J	0.31 U	0.39 J	0.28 U	0.73 U	0.29 U	0.016 J	0.29 U	0.035 J	0.29 U	0.28 U	0.31 U	0.024 J	0.43
Benzo(a)pyrene	mg/kg	0.3 U	0.025 J	0.31 U	0.4 J	0.28 U	0.73 U	0.29 U	0.022 J	0.29 U	0.042 J	0.29 U	0.28 U	0.31 U	0.021 J	0.16 J
Benzo(b)fluoranthene	mg/kg	0.3 U	0.046 J	0.0085 J	0.5 J	0.28 U	0.025 J	0.29 U	0.042 J	0.29 U	0.074 J	0.29 U	0.28 U	0.31 U	0.03 J	0.24 J
Benzo(g,h,i)perylene	mg/kg	0.3 U	0.024 J	0.31 U	0.37 J	0.28 U	0.73 U	0.29 U	0.049 J	0.29 U	0.042 J	0.29 U	0.28 U	0.31 U	0.017 J	0.072 J
Benzo(k)fluoranthene	mg/kg	0.3 U	0.015 J	0.31 U	0.23 J	0.28 U	0.73 U	0.29 U	0.29 U	0.29 U	0.028 J	0.29 U	0.28 U	0.31 U	0.014 J	0.11 J
Biphenyl (1,1-Biphenyl)	mg/kg	0.3 U	0.29 U	0.31 U	0.74 U	0.28 U	0.73 U	0.29 U	0.29 U	0.29 UJ	0.29 U	0.29 U	0.28 U	0.31 UJ	0.28 U	0.061 J
bis(2-Chloroethoxy)methane	mg/kg	0.3 U	0.29 U	0.31 U	0.74 U	0.28 U	0.73 U	0.29 U	0.29 U	0.29 U	0.29 U	0.29 U	0.28 U	0.31 U	0.28 U	0.27 U
bis(2-Chloroethyl)ether	mg/kg	0.09 U	0.086 U	0.093 U	0.22 U	0.086 U	0.22 U	0.089 U	0.087 U	0.087 U	0.088 U	0.088 U	0.086 U	0.095 U	0.086 U	0.082 U
bis(2-Ethylhexyl)phthalate (DEHP)	mg/kg	0.029 J	0.29 U	0.31 U	0.086 J	0.038 J	0.73 U	0.29 U	0.079 J	0.29 U	0.034 J	0.039 J	0.28 U	0.024 J	0.055 J	0.29

TABLE 3.8

PART 201 CRITERIA EXCEEDANCES - SOIL
2013 RFI REPORT
FORMER GENERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation		*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*WEST01*	*WEST01*	*WEST01*	*WEST01*	*WEST01*	*WEST01*	*WEST01*	*WEST01*
Perimeter Status (1)		*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*
Sample Location		*CRA-710M*	*CRA-833M*	*CRA-833M*	*CRA-834M*	*CRA-834M*	*CRA-835SB*	*CRA-835SB*	*CRA-713M*	*CRA-713M*	*CRA-720I*	*CRA-720I*	*CRA-786SB*	*CRA-786SB*	*CRA-812SB*	*CRA-812SB*
Sample Identification (SO-17358-)		*011812-DR-008*	*011912-DR-021*	*011912-DR-022*	*011812-DR-017*	*011812-DR-018*	*011912-DR-019*	*011912-DR-020*	*031512-CB-201*	*031512-CB-202*	*031312-DR-066*	*031312-DR-067*	*031512-CB-199*	*031512-CB-200*	*031212-CB-187*	*031212-CB-188*
Sample Date		*1/18/2012*	*1/19/2012*	*1/19/2012*	*1/18/2012*	*1/18/2012*	*1/19/2012*	*1/19/2012*	*3/15/2012*	*3/15/2012*	*3/13/2012*	*3/13/2012*	*3/15/2012*	*3/15/2012*	*3/12/2012*	*3/12/2012*
Sample Depth		*(2-4) ft BGS*	*(0-2) ft BGS*	*(3-5) ft BGS*	*(0-2) ft BGS*	*(3-5) ft BGS*	*(0-2) ft BGS*	*(2-4) ft BGS*	*(0-2) ft BGS*	*(6-8) ft BGS*	*(0-2) ft BGS*	*(8-10) ft BGS*	*(1.5-3.5) ft BGS*	*(3.5-5.5) ft BGS*	*(1-3) ft BGS*	*(6-8) ft BGS*
Sample Type																
	Units															
SVOCs Continued																
Butyl benzylphthalate (BBP)	mg/kg	0.3 U	0.29 U	0.31 U	0.74 U	0.28 U	0.73 U	0.29 U	0.29 U	0.29 U	0.29 U	0.29 U	0.28 U	0.31 U	0.031 J	0.27 U
Caprolactam	mg/kg	0.3 U	0.29 U	0.31 U	0.74 U	0.28 U	0.73 U	0.29 U	0.29 U	0.29 U	0.29 U	0.29 U	0.28 U	0.31 U	0.28 U	0.27 U
Carbazole	mg/kg	0.3 U	0.29 U	0.31 U	0.083 J	0.28 U	0.73 U	0.29 U	0.29 U	0.29 U	0.29 U	0.29 U	0.28 U	0.31 U	0.28 U	0.27 U
Chrysene	mg/kg	0.3 U	0.028 J	0.31 U	0.4 J	0.28 U	0.73 U	0.29 U	0.049 J	0.29 U	0.054 J	0.29 U	0.28 U	0.31 U	0.028 J	0.34
Dibenz(a,h)anthracene	mg/kg	0.3 U	0.29 U	0.31 U	0.054 J	0.28 U	0.73 U	0.29 U	0.29 U	0.29 U	0.29 U	0.29 U	0.28 U	0.31 U	0.28 U	0.27 U
Dibenzofuran	mg/kg	0.3 U	0.29 U	0.31 U	0.031 J	0.28 U	0.73 U	0.29 U	0.29 U	0.29 U	0.29 U	0.29 U	0.28 U	0.31 U	0.041 J	0.49
Diethyl phthalate	mg/kg	0.3 U	0.29 U	0.31 U	0.74 U	0.28 U	0.73 U	0.29 U	0.29 U	0.29 U	0.29 U	0.29 U	0.28 U	0.31 U	0.28 U	0.27 U
Dimethyl phthalate	mg/kg	0.3 U	0.29 U	0.31 U	0.74 U	0.28 U	0.73 U	0.29 U	0.29 U	0.29 U	0.29 U	0.29 U	0.28 U	0.31 U	0.28 U	0.27 U
Di-n-butylphthalate (DBP)	mg/kg	0.3 U	0.29 U	0.31 U	0.74 U	0.28 U	0.73 U	0.29 U	0.29 U	0.29 U	0.29 U	0.29 U	0.28 U	0.31 U	0.28 U	0.27 U
Di-n-octyl phthalate (DnOP)	mg/kg	0.3 U	0.29 U	0.31 U	0.74 U	0.28 U	0.73 U	0.29 U	0.29 U	0.29 U	0.29 U	0.29 U	0.28 U	0.31 U	0.28 U	0.27 U
Fluoranthene	mg/kg	0.3 U	0.028 J	0.31 U	0.89	0.28 U	0.01 J	0.29 U	0.028 J	0.29 U	0.068 J	0.29 U	0.004 J	0.0086 J	0.054 J	2
Fluorene	mg/kg	0.3 U	0.29 U	0.31 U	0.04 J	0.28 U	0.73 U	0.29 U	0.29 U	0.29 U	0.29 U	0.29 U	0.28 U	0.31 U	0.012 J	0.8
Hexachlorobenzene	mg/kg	0.3 U	0.29 U	0.31 U	0.74 U	0.28 U	0.73 U	0.29 U	0.29 U	0.29 U	0.29 U	0.29 U	0.28 U	0.31 U	0.28 U	0.27 U
Hexachlorobutadiene	mg/kg	0.045 U	0.043 U	0.046 U	0.11 U	0.043 U	0.11 U	0.044 U	0.043 U	0.044 U	0.044 U	0.044 U	0.043 U	0.047 U	0.043 U	0.041 U
Hexachlorocyclopentadiene	mg/kg	0.3 U	0.29 U	0.31 U	0.74 U	0.28 U	0.73 U	0.29 U	0.29 U	0.29 U	0.29 U	0.29 U	0.28 U	R	0.28 U	0.27 U
Hexachloroethane	mg/kg	0.3 U	0.29 U	0.31 U	0.74 U	0.28 U	0.73 U	0.29 U	0.29 U	0.29 U	0.29 U	0.29 U	0.28 U	0.31 U	0.28 U	0.27 U
Indeno(1,2,3-cd)pyrene	mg/kg	0.3 U	0.019 J	0.31 U	0.26 J	0.28 U	0.73 U	0.29 U	0.014 J	0.29 U	0.033 J	0.29 U	0.016 J	0.31 U	0.014 J	0.057 J
Isophorone	mg/kg	0.3 U	0.29 U	0.31 U	0.74 U	0.28 U	0.73 U	0.29 U	0.29 U	0.29 U	0.29 U	0.29 U	0.28 U	0.31 U	0.28 U	0.27 U
Naphthalene	mg/kg	0.3 U	0.29 U	0.31 U	0.033 J	0.28 U	0.73 U	0.29 U	0.29 U	0.29 U	0.29 U	0.29 U	0.28 U	0.31 U	0.016 J	0.091 J
Nitrobenzene	mg/kg	0.3 U	0.29 U	0.31 U	0.74 U	0.28 U	0.73 U	0.29 U	0.29 U	0.29 U	0.29 U	0.29 U	0.28 U	0.31 U	0.28 U	0.27 U
N-Nitrosodi-n-propylamine	mg/kg	0.3 U	0.29 U	0.31 U	0.74 U	0.28 U	0.73 U	0.29 U	0.29 U	0.29 U	0.29 U	0.29 U	0.28 U	0.31 U	0.28 U	0.27 U
N-Nitrosodiphenylamine	mg/kg	0.3 U	0.29 U	0.31 U	0.74 U	0.28 U	0.73 U	0.29 U	0.29 U	0.29 U	0.29 U	0.29 U	0.28 U	0.31 U	0.28 U	0.27 U
Pentachlorophenol	mg/kg	0.17 U	0.16 U	0.17 U	0.42 U	0.16 U	0.41 U	0.17 U	0.16 U	0.16 U	0.17 U	0.16 U	0.16 U	0.18 U	0.16 U	0.15 U
Phenanthrene	mg/kg	0.3 U	0.29 U	0.31 U	0.52 J	0.28 U	0.73 U	0.29 U	0.015 J	0.29 U	0.023 J	0.29 U	0.28 U	0.0052 J	0.082 J	**3.3[d]**
Phenol	mg/kg	0.3 U	0.29 U	0.31 U	0.74 U	0.28 U	0.73 U	0.29 U	0.29 U	0.29 U	0.29 U	0.29 U	0.28 U	0.31 U	0.28 U	0.27 U
Pyrene	mg/kg	0.3 U	0.029 J	0.31 U	0.67 J	0.28 U	0.0094 J	0.29 U	0.024 J	0.29 U	0.058 J	0.29 U	0.28 U	0.0073 J	0.041 J	1.2
Metals																
Aluminum	mg/kg	2300	3500	5300	3400	2900	3900	4100	3500	2900	4700	2900	4500	6700	3600	1800
Antimony	mg/kg	0.12 J	0.063 J	0.049 J	0.07 J	0.071 J	0.042 J	0.037 J	0.078 J	0.064 J	0.074 J	0.076 J	0.042 J	0.064 J	0.06 J	0.044 J
Arsenic	mg/kg	**6.8[bcd]**	3.7	**7.5[bcd]**	3.7	**7.7[bcdp]**	3.1	3	3.6	1.2	4.2	5	3.6	4.4	4.8	2
Barium	mg/kg	7.3	19	80	31	47	19	16	31	11	46	13	27	40	19	6.9
Beryllium	mg/kg	0.12 U	0.15 U	0.083 J	0.16 U	0.07 J	0.17 U	0.16 U	0.23	0.17 U	0.27	0.063 J	0.083 J	0.18	0.16 U	0.16 U
Cadmium	mg/kg	0.029 J	0.075 J	0.079 U	0.1	0.15	0.087 U	0.082 U	0.12	0.075 J	0.084	0.08 U	0.078 U	0.18	0.053 J	0.055 J
Calcium	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chromium	mg/kg	6.2	7.7	11	9.6	6.6	6.5	9.7	10	6.7	8.4	5.8	7.3	14	8.9	4.9
Chromium III (trivalent)	mg/kg	5.7	7.3	10	-	-	-	-	-	-	8.4	5.8	-	-	-	-
Chromium VI (hexavalent)	mg/kg	0.53 J	0.45 J	0.85 J	-	-	-	-	-	-	0.88 U	0.88 U	-	-	-	-
Cobalt	mg/kg	3.2	3	3.8	3.3	6.3	1.6	2.7	2.7	3	4.2	2.9	3.5	3.4	4.2	2
Copper	mg/kg	9.1	7.1	5.6	18	7.7	2.8	3.3	12	9.8	11	6.7	8.4	9.2	16	6.7
Iron	mg/kg	12000	7600	**16000[bc]**	7700	12000	7000	8600	7300	6100	9800	10000	9000	**13000[c]**	8800	3800
Lead	mg/kg	3.1	5.5	5.5	14	4.9	4.5	4.7	15	4.7	10	4.4	6.4	8.1	7.3	2.8
Lead - coarse fraction	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lead - fine fraction	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lead - total (calculated by fine/coarse fraction)	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Magnesium	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

TABLE 3.8

PART 201 CRITERIA EXCEEDANCES - SOIL
2013 RFI REPORT
FORMER GENERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation		*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*WEST01*	*WEST01*	*WEST01*	*WEST01*	*WEST01*	*WEST01*	*WEST01*	*WEST01*
Perimeter Status (1)		*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*
Sample Location		*CRA-710M*	*CRA-833M*	*CRA-833M*	*CRA-834M*	*CRA-834M*	*CRA-835SB*	*CRA-835SB*	*CRA-713M*	*CRA-713M*	*CRA-720I*	*CRA-720I*	*CRA-786SB*	*CRA-786SB*	*CRA-812SB*	*CRA-812SB*
Sample Identification (SO-17358-)		*011812-DR-008*	*011912-DR-021*	*011912-DR-022*	*011812-DR-017*	*011812-DR-018*	*011912-DR-019*	*011912-DR-020*	*031512-CB-201*	*031512-CB-202*	*031312-DR-066*	*031312-DR-067*	*031512-CB-199*	*031512-CB-200*	*031212-CB-187*	*031212-CB-188*
Sample Date		*1/18/2012*	*1/19/2012*	*1/19/2012*	*1/18/2012*	*1/18/2012*	*1/19/2012*	*1/19/2012*	*3/15/2012*	*3/15/2012*	*3/13/2012*	*3/13/2012*	*3/15/2012*	*3/15/2012*	*3/12/2012*	*3/12/2012*
Sample Depth		*(2-4) ft BGS*	*(0-2) ft BGS*	*(3-5) ft BGS*	*(0-2) ft BGS*	*(3-5) ft BGS*	*(0-2) ft BGS*	*(2-4) ft BGS*	*(0-2) ft BGS*	*(6-8) ft BGS*	*(0-2) ft BGS*	*(8-10) ft BGS*	*(1.5-3.5) ft BGS*	*(3.5-5.5) ft BGS*	*(1-3) ft BGS*	*(6-8) ft BGS*
Sample Type																
	Units															
Metals Continued																
Manganese	mg/kg	110 J	180 J	300 J	190 J	**710 J[bcd]**	54 J	59 J	**470[cd]**	130	370	230	330	180	310	130
Mercury	mg/kg	0.034 U	0.041 U	0.027 J	0.026 J	0.035 U	0.041 U	0.043 U	0.027 J	0.046 U	0.041	0.049 U	0.037 J	0.051	0.031 J	0.038 J
Nickel	mg/kg	5.9	7.6	9.4	8.2	9.7	4.2	7	8.8	9.2	11	7.8	9.2	8.5	9	5.9
Potassium	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Selenium	mg/kg	**0.44[d]**	**0.48[d]**	**0.63[d]**	**0.48[d]**	**0.73[d]**	0.36	**0.44[d]**	0.37 J	0.26 J	0.4	0.32	0.4 J	**0.74 J[d]**	0.27	**0.46[d]**
Silver	mg/kg	0.061 U	0.076 U	0.025 J	0.033 J	0.078 U	0.087 U	0.082 U	0.077 U	0.086 U	0.015 J	0.08 U	0.078 U	0.028 J	0.016 J	0.079 U
Sodium	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Thallium	mg/kg	0.061 U	0.11	0.083	0.088	0.075 J	0.11	0.13	0.12	0.1 U	0.15 U	0.1 U	0.11	0.087 U	0.15 U	0.091 U
Vanadium	mg/kg	15	11	18	9.7	17	13	13	12	9.7	13	11	12	18	12	6.1
Zinc	mg/kg	17	19	32	26	19	12	18	20	21	42	20	23	38	23	13
Polychlorinated biphenyls (PCBs)																
Aroclor-1016 (PCB-1016)	mg/kg	0.037 U	0.036 U	0.038 U	0.037 U	0.035 U	0.036 U	0.037 U	0.036 U	0.036 U	0.037 U	0.036 U	0.035 U	0.039 U	0.035 U	0.34 U
Aroclor-1221 (PCB-1221)	mg/kg	0.037 U	0.036 U	0.038 U	0.037 U	0.035 U	0.036 U	0.037 U	0.036 U	0.036 U	0.037 U	0.036 U	0.035 U	0.039 U	0.035 U	0.34 U
Aroclor-1232 (PCB-1232)	mg/kg	0.037 U	0.036 U	0.038 U	0.037 U	0.035 U	0.036 U	0.037 U	0.036 U	0.036 U	0.037 U	0.036 U	0.035 U	0.039 U	0.035 U	0.34 U
Aroclor-1242 (PCB-1242)	mg/kg	0.037 U	0.036 U	0.038 U	0.037 U	0.035 U	0.036 U	0.037 U	0.036 U	0.036 U	0.037 U	0.036 U	0.035 U	0.039 U	0.035 U	0.34 U
Aroclor-1248 (PCB-1248)	mg/kg	0.037 U	0.036 U	0.038 U	0.037 U	0.035 U	0.036 U	0.037 U	0.036 U	0.036 U	0.037 U	0.036 U	0.035 U	0.039 U	0.035 U	0.34 U
Aroclor-1254 (PCB-1254)	mg/kg	0.037 U	0.036 U	0.038 U	0.037 U	0.035 U	0.036 U	0.037 U	0.036 U	0.036 U	0.037 U	0.036 U	0.035 U	0.039 U	0.035 U	0.34 U
Aroclor-1260 (PCB-1260)	mg/kg	0.037 U	0.036 U	0.038 U	0.079	0.035 U	0.036 U	0.037 U	0.036 U	0.036 U	0.037 U	0.036 U	0.035 U	0.039 U	0.035 U	0.34 U
Aroclor-1262 (PCB-1262)	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Aroclor-1268 (PCB-1268)	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total PCBs	mg/kg	ND	ND	ND	0.079	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Notes

Michigan Part 201 generic clean up criteria (updated September 28, 2012)

ID - Insufficient data to develop criterion

NLV - Hazardous substance is not likely to volatilize under most conditions

NA - Criterion or value is not available

Perimeter Status (1) - N - non-perimeter, Y - perimeter

mg/kg - milligram/kilogram

Notes:

U - Not detected at the associated reporting limit.

J - Estimated concentration.

UJ - Not detected; associated reporting limit is estimated.

R - Rejected

TABLE 3.8

PART 201 CRITERIA EXCEEDANCES - SOIL
2013 RFI REPORT
FORMER GENERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation		*WEST02*	*WEST02*	*WEST02*	*WEST02*	*WEST02*	*WEST02*	*WEST02*	*WEST02*	*WEST02*	*WEST02*	*WEST02*	*WEST02*	*WEST02*	*WEST02*	*WEST02*	*WEST02*
Perimeter Status (1)		*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*Y*	*Y*
Sample Location		*CRA-721M*	*CRA-721M*	*CRA-722M*	*CRA-722M*	*CRA-731I*	*CRA-731I*	*CRA-732SB*	*CRA-732SB*	*CRA-737M*	*CRA-737M*	*CRA-810SB*	*CRA-810SB*	*CRA-811SB*	*CRA-811SB*	*CRA-811SB*	*CRA-726D*	*CRA-726D*
Sample Identification (SO-17358-)		*031912-CB-205*	*031912-CB-206*	*031912-CB-207*	*031912-CB-208*	*030112-DR-048*	*030112-DR-049*	*031212-CB-185*	*031212-CB-186*	*022912-DR-046*	*022912-DR-047*	*031212-CB-192*	*031212-CB-193*	*031212-CB-189*	*031212-CB-190*	*031212-CB-191*	*032012-DR-078*	*032012-DR-079*
Sample Date		*3/19/2012*	*3/19/2012*	*3/19/2012*	*3/19/2012*	*3/1/2012*	*3/1/2012*	*3/12/2012*	*3/12/2012*	*2/29/2012*	*2/29/2012*	*3/12/2012*	*3/12/2012*	*3/12/2012*	*3/12/2012*	*3/12/2012*	*3/20/2012*	*3/20/2012*
Sample Depth		*(0-2) ft BGS*	*(3-5) ft BGS*	*(0-2) ft BGS*	*(6-8) ft BGS*	*(1-3) ft BGS*	*(6-8) ft BGS*	*(1-3) ft BGS*	*(6.5-8.5) ft BGS*	*(1-2) ft BGS*	*(5-7) ft BGS*	*(1.5-3.5) ft BGS*	*(7-9) ft BGS*	*(1-3) ft BGS*	*(5.5-7.5) ft BGS*	*(5.5-7.5) ft BGS*	*(0-2) ft BGS*	*(6.5-8.5) ft BGS*
Sample Type																*Duplicate*		
	Units																	
Volatile Organic Compounds (VOCs)																		
1,1,1-Trichloroethane	mg/kg	0.045 U	0.045 U	0.039 U	0.04 U	0.048 U	0.041 U	-	-	-	-	0.044 U	0.04 U	0.045 U	0.042 U	0.041 U	0.052 U	0.051 U
1,1,2,2-Tetrachloroethane	mg/kg	0.045 U	0.045 U	0.039 U	0.04 U	0.048 U	0.041 U	-	-	-	-	0.044 U	0.04 U	0.045 U	0.042 U	0.041 U	0.052 U	0.051 U
1,1,2-Trichloroethane	mg/kg	0.045 U	0.045 U	0.039 U	0.04 U	0.048 U	0.041 U	-	-	-	-	0.044 U	0.04 U	0.045 U	0.042 U	0.041 U	0.052 U	0.051 U
1,1-Dichloroethane	mg/kg	0.045 U	0.045 U	0.039 U	0.04 U	0.048 U	0.041 U	-	-	-	-	0.044 U	0.04 U	0.045 U	0.042 U	0.041 U	0.052 U	0.051 U
1,1-Dichloroethene	mg/kg	0.045 U	0.045 U	0.039 U	0.04 U	0.048 U	0.041 U	-	-	-	-	0.044 U	0.04 U	0.045 U	0.042 U	0.041 U	0.052 U	0.051 U
1,2,4-Trichlorobenzene	mg/kg	0.22 U	0.23 U	0.2 U	0.2 U	0.24 U	0.2 U	-	-	-	-	0.22 U	0.2 U	0.23 U	0.21 U	0.21 U	0.26 U	0.26 U
1,2-Dibromo-3-chloropropane (DBCP)	mg/kg	0.22 U	0.23 U	0.2 U	0.2 U	0.24 U	0.2 U	-	-	-	-	0.22 U	0.2 U	0.23 U	0.21 U	0.21 U	0.26 U	0.26 U
1,2-Dibromoethane (Ethylene dibromide)	mg/kg	0.22 U	0.23 U	0.2 U	0.2 U	0.24 U	0.2 U	-	-	-	-	0.22 U	0.2 U	0.23 U	0.21 U	0.21 U	0.26 U	0.26 U
1,2-Dichlorobenzene	mg/kg	0.09 U	0.09 U	0.079 U	0.081 U	0.095 U	0.082 U	-	-	-	-	0.088 U	0.081 U	0.091 U	0.085 U	0.082 U	0.1 U	0.1 U
1,2-Dichloroethane	mg/kg	0.045 U	0.045 U	0.039 U	0.04 U	0.048 U	0.041 U	-	-	-	-	0.044 U	0.04 U	0.045 U	0.042 U	0.041 U	0.052 U	0.051 U
1,2-Dichloropropane	mg/kg	0.045 U	0.045 U	0.039 U	0.04 U	0.048 U	0.041 U	-	-	-	-	0.044 U	0.04 U	0.045 U	0.042 U	0.041 U	0.052 U	0.051 U
1,3-Dichlorobenzene	mg/kg	0.09 U	0.09 U	0.079 U	0.081 U	0.095 U	0.082 U	-	-	-	-	0.088 U	0.081 U	0.091 U	0.085 U	0.082 U	0.1 U	0.1 U
1,4-Dichlorobenzene	mg/kg	0.09 U	0.09 U	0.079 U	0.081 U	0.095 U	0.082 U	-	-	-	-	0.088 U	0.081 U	0.091 U	0.085 U	0.082 U	0.1 U	0.1 U
2-Butanone (Methyl ethyl ketone) (MEK)	mg/kg	0.67 U	0.68 U	0.59 U	0.61 U	0.71 U	0.61 U	-	-	-	-	0.66 U	0.61 U	0.68 U	0.63 U	0.62 U	0.78 U	0.77 U
2-Hexanone	mg/kg	2.2 U	2.3 U	2 U	2 U	2.4 U	2 U	-	-	-	-	2.2 U	2 U	2.3 U	2.1 U	2.1 U	2.6 U	2.6 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	mg/kg	2.2 U	2.3 U	2 U	2 U	2.4 U	2 U	-	-	-	-	2.2 U	2 U	2.3 U	2.1 U	2.1 U	2.6 U	2.6 U
Acetone	mg/kg	0.67 U	0.68 U	0.59 U	0.61 U	0.71 U	0.61 U	-	-	-	-	0.66 U	0.61 U	0.68 U	0.63 U	0.62 U	0.78 U	0.77 U
Benzene	mg/kg	0.045 U	0.045 U	0.039 U	0.04 U	0.048 U	0.041 U	-	-	-	-	0.044 U	0.04 U	0.045 U	0.042 U	0.041 U	0.052 U	0.051 U
Bromodichloromethane	mg/kg	0.09 U	0.09 U	0.079 U	0.081 U	0.095 U	0.082 U	-	-	-	-	0.088 U	0.081 U	0.091 U	0.085 U	0.082 U	0.1 U	0.1 U
Bromoform	mg/kg	0.09 U	0.09 U	0.079 U	0.081 U	0.095 U	0.082 U	-	-	-	-	0.088 U	0.081 U	0.091 U	0.085 U	0.082 U	0.1 U	0.1 U
Bromomethane (Methyl bromide)	mg/kg	0.22 U	0.23 U	0.2 U	0.2 U	0.24 U	0.2 U	-	-	-	-	0.22 U	0.2 U	0.23 U	0.21 U	0.21 U	0.26 U	0.26 U
Carbon disulfide	mg/kg	0.22 U	0.23 U	0.2 U	0.2 U	0.24 U	0.2 U	-	-	-	-	0.22 U	0.2 U	0.23 U	0.21 U	0.21 U	0.26 U	0.26 U
Carbon tetrachloride	mg/kg	0.045 U	0.045 U	0.039 U	0.04 U	0.048 U	0.041 U	-	-	-	-	0.044 U	0.04 U	0.045 U	0.042 U	0.041 U	0.052 U	0.051 U
Chlorobenzene	mg/kg	0.045 U	0.045 U	0.039 U	0.04 U	0.048 U	0.041 U	-	-	-	-	0.044 U	0.04 U	0.045 U	0.042 U	0.041 U	0.052 U	0.051 U
Chloroethane	mg/kg	0.22 U	0.23 U	0.2 U	0.2 U	0.24 U	0.2 U	-	-	-	-	0.22 U	0.2 U	0.23 U	0.21 U	0.21 U	0.26 U	0.26 U
Chloroform (Trichloromethane)	mg/kg	0.045 U	0.045 U	0.039 U	0.04 U	0.048 U	0.041 U	-	-	-	-	0.044 U	0.04 U	0.045 U	0.042 U	0.041 U	0.052 U	0.051 U
Chloromethane (Methyl chloride)	mg/kg	0.22 U	0.23 U	0.2 U	0.2 U	0.24 U	0.2 U	-	-	-	-	0.22 U	0.2 U	0.23 U	0.21 U	0.21 U	0.26 U	0.26 U
cis-1,2-Dichloroethene	mg/kg	0.045 U	0.045 U	0.039 U	0.04 U	0.048 U	0.041 U	-	-	-	-	0.044 U	0.04 U	0.045 U	0.042 U	0.041 U	0.052 U	0.051 U
cis-1,3-Dichloropropene	mg/kg	0.045 U	0.045 U	0.039 U	0.04 U	0.048 U	0.041 U	-	-	-	-	0.044 U	0.04 U	0.045 U	0.042 U	0.041 U	0.052 U	0.051 U
Cyclohexane	mg/kg	1.1 U	1.1 U	0.94 U	0.97 U	1.1 U	0.98 U	-	-	-	-	1.1 U	0.97 U	1.1 U	1 U	0.99 U	1.2 U	1.2 U
Dibromochloromethane	mg/kg	0.045 U	0.045 U	0.039 U	0.04 U	0.048 U	0.041 U	-	-	-	-	0.044 U	0.04 U	0.045 U	0.042 U	0.041 U	0.052 U	0.051 U
Dichlorodifluoromethane (CFC-12)	mg/kg	0.09 U	0.09 U	0.079 U	0.081 U	0.095 U	0.082 U	-	-	-	-	0.088 U	0.081 U	0.091 U	0.085 U	0.082 U	0.1 U	0.1 U
Ethylbenzene	mg/kg	0.045 U	0.045 U	0.039 U	0.04 U	0.048 U	0.041 U	-	-	-	-	0.044 U	0.04 U	0.008 J	0.042 U	0.041 U	0.052 U	0.051 U
Isopropyl benzene	mg/kg	0.22 U	0.23 U	0.2 U	0.2 U	0.24 U	0.2 U	-	-	-	-	0.22 U	0.2 U	0.23 U	0.21 U	0.21 U	0.26 U	0.26 U
Methyl acetate	mg/kg	1.1 U	1.1 U	0.94 U	0.97 U	1.1 U	0.98 U	-	-	-	-	0.1 J	0.97 U	0.049 J	1 U	0.99 U	1.2 U	1.2 U
Methyl cyclohexane	mg/kg	1.1 U	1.1 U	0.94 U	0.97 U	1.1 U	0.98 U	-	-	-	-	1.1 U	0.28 J	1.1 U	1 U	0.99 U	1.2 U	1.2 U
Methyl tert butyl ether (MTBE)	mg/kg	0.22 U	0.23 U	0.2 U	0.2 U	0.24 U	0.2 U	-	-	-	-	0.22 U	0.2 U	0.23 U	0.21 U	0.21 U	0.26 U	0.26 U
Methylene chloride	mg/kg	0.22 U	0.23 U	0.2 U	0.2 U	0.24 U	0.2 U	-	-	-	-	0.22 U	0.2 U	0.23 U	0.21 U	0.21 U	0.26 U	0.26 U
Styrene	mg/kg	0.045 U	0.045 U	0.039 U	0.04 U	0.048 U	0.041 U	-	-	-	-	0.044 U	0.04 U	0.045 U	0.042 U	0.041 U	0.052 U	0.051 U
Tetrachloroethene	mg/kg	0.045 U	0.045 U	0.039 U	0.04 U	0.018 J	0.041 U	-	-	-	-	0.044 U	0.04 U	0.045 U	0.042 U	0.041 U	0.052 U	0.051 U
Toluene	mg/kg	0.09 U	0.09 U	0.079 U	0.081 U	0.095 U	0.082 U	-	-	-	-	0.088 U	0.081 U	0.091 U	0.085 U	0.082 U	0.1 U	0.1 U
trans-1,2-Dichloroethene	mg/kg	0.045 U	0.045 U	0.039 U	0.04 U	0.048 U	0.041 U	-	-	-	-	0.044 U	0.04 U	0.045 U	0.042 U	0.041 U	0.052 U	0.051 U
trans-1,3-Dichloropropene	mg/kg	0.045 U	0.045 U	0.039 U	0.04 U	0.048 U	0.041 U	-	-	-	-	0.044 U	0.04 U	0.045 U	0.042 U	0.041 U	0.052 U	0.051 U
Trichloroethene	mg/kg	0.045 U	0.045 U	0.039 U	0.04 U	0.048 U	0.041 U	-	-	-	-	0.044 U	0.04 U	0.045 U	0.042 U	0.041 U	0.052 U	0.051 U

TABLE 3.8

PART 201 CRITERIA EXCEEDANCES - SOIL
2013 RFI REPORT
FORMER GENERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation		*WEST02*	*WEST02*	*WEST02*	*WEST02*	*WEST02*	*WEST02*	*WEST02*	*WEST02*	*WEST02*	*WEST02*	*WEST02*	*WEST02*	*WEST02*	*WEST02*	*WEST02*	*WEST02*
Perimeter Status (1)		*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*Y*	*Y*
Sample Location		*CRA-721M*	*CRA-721M*	*CRA-722M*	*CRA-722M*	*CRA-731I*	*CRA-731I*	*CRA-732SB*	*CRA-732SB*	*CRA-737M*	*CRA-737M*	*CRA-810SB*	*CRA-810SB*	*CRA-811SB*	*CRA-811SB*	*CRA-811SB*	*CRA-726D*	*CRA-726D*
Sample Identification (SO-17358-)		*031912-CB-205*	*031912-CB-206*	*031912-CB-207*	*031912-CB-208*	*030112-DR-048*	*030112-DR-049*	*031212-CB-185*	*031212-CB-186*	*022912-DR-046*	*022912-DR-047*	*031212-CB-192*	*031212-CB-193*	*031212-CB-189*	*031212-CB-190*	*031212-CB-191*	*032012-DR-078*	*032012-DR-079*
Sample Date		*3/19/2012*	*3/19/2012*	*3/19/2012*	*3/19/2012*	*3/1/2012*	*3/1/2012*	*3/12/2012*	*3/12/2012*	*2/29/2012*	*2/29/2012*	*3/12/2012*	*3/12/2012*	*3/12/2012*	*3/12/2012*	*3/12/2012*	*3/20/2012*	*3/20/2012*
Sample Depth		*(0-2) ft BGS*	*(3-5) ft BGS*	*(0-2) ft BGS*	*(6-8) ft BGS*	*(1-3) ft BGS*	*(6-8) ft BGS*	*(1-3) ft BGS*	*(6.5-8.5) ft BGS*	*(1-2) ft BGS*	*(5-7) ft BGS*	*(1.5-3.5) ft BGS*	*(7-9) ft BGS*	*(1-3) ft BGS*	*(5.5-7.5) ft BGS*	*(5.5-7.5) ft BGS*	*(0-2) ft BGS*	*(6.5-8.5) ft BGS*
Sample Type																*Duplicate*		
	Units																	
VOCs Continued																		
Trichlorofluoromethane (CFC-11)	mg/kg	0.09 U	0.09 U	0.079 U	0.081 U	0.095 U	0.082 U	-	-	-	-	0.088 U	0.081 U	0.091 U	0.085 U	0.082 U	0.1 U	0.1 U
Trifluorotrichloroethane (Freon 113)	mg/kg	0.22 U	0.23 U	0.2 U	0.2 U	0.24 U	0.2 U	-	-	-	-	0.22 U	0.2 U	0.23 U	0.21 U	0.21 U	0.26 U	0.26 U
Vinyl chloride	mg/kg	0.036 U	0.036 U	0.031 U	0.032 U	0.038 U	0.033 U	-	-	-	-	0.035 U	0.032 U	0.036 U	0.034 U	0.033 U	0.041 U	0.041 U
Xylenes (total)	mg/kg	0.13 U	0.14 U	0.12 U	0.12 U	0.14 U	0.12 U	-	-	-	-	0.0098 J	0.0095 J	0.037 J	0.13 U	0.12 U	0.16 U	0.15 U
Semi-Volatile Organic Compounds (SVOCs)																		
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	mg/kg	0.3 U	0.3 U	0.28 U	0.28 U	0.29 U	0.27 U	-	-	-	-	0.29 U	0.27 U	0.29 U	0.27 U	0.27 U	0.29 U	0.28 U
2,4,5-Trichlorophenol	mg/kg	0.3 U	0.3 U	0.28 U	0.28 U	0.29 U	0.27 U	-	-	-	-	0.29 U	0.27 U	0.29 U	0.27 U	0.27 U	0.29 U	0.28 U
2,4,6-Trichlorophenol	mg/kg	0.3 U	0.3 U	0.28 U	0.28 U	0.29 U	0.27 U	-	-	-	-	0.29 U	0.27 U	0.29 U	0.27 U	0.27 U	0.29 U	0.28 U
2,4-Dichlorophenol	mg/kg	0.3 U	0.3 U	0.28 U	0.28 U	0.29 U	0.27 U	-	-	-	-	0.29 U	0.27 U	0.29 U	0.27 U	0.27 U	0.29 U	0.28 U
2,4-Dimethylphenol	mg/kg	0.3 U	0.3 U	0.28 U	0.28 U	0.29 U	0.27 U	-	-	-	-	0.29 U	0.27 U	0.29 U	0.27 U	0.27 U	0.29 U	0.28 U
2,4-Dinitrophenol	mg/kg	0.17 U	0.17 U	0.16 U	0.16 U	0.17 U	0.16 U	-	-	-	-	0.17 U	0.15 U	0.16 U	0.16 U	0.15 U	0.17 U	R
2,4-Dinitrotoluene	mg/kg	0.3 U	0.3 U	0.28 U	0.28 U	0.29 U	0.27 U	-	-	-	-	0.29 U	0.27 U	0.29 U	0.27 U	0.27 U	0.29 U	0.28 U
2,6-Dinitrotoluene	mg/kg	0.3 U	0.3 U	0.28 U	0.28 U	0.29 U	0.27 U	-	-	-	-	0.29 U	0.27 U	0.29 U	0.27 U	0.27 U	0.29 U	0.28 U
2-Chloronaphthalene	mg/kg	0.3 U	0.3 U	0.28 U	0.28 U	0.29 U	0.27 U	-	-	-	-	0.29 U	0.27 U	0.29 U	0.27 U	0.27 U	0.29 U	0.28 U
2-Chlorophenol	mg/kg	0.3 U	0.3 U	0.28 U	0.28 U	0.29 U	0.27 U	-	-	-	-	0.29 U	0.27 U	0.29 U	0.27 U	0.27 U	0.29 U	0.28 U
2-Methylnaphthalene	mg/kg	0.0041 J	0.3 U	0.28 U	0.28 U	0.025 J	0.27 U	-	-	-	-	0.29 U	0.019 J	0.17 J	0.27 U	0.27 U	0.29 U	0.28 U
2-Methylphenol	mg/kg	0.3 U	0.3 U	0.28 U	0.28 U	0.29 U	0.27 U	-	-	-	-	0.29 U	0.27 U	0.29 U	0.27 U	0.27 U	0.29 U	0.28 U
2-Nitroaniline	mg/kg	0.22 U	0.23 U	0.21 U	0.21 U	0.22 U	0.21 U	-	-	-	-	0.22 U	0.2 U	0.22 U	0.21 U	0.21 U	0.22 U	0.21 U
2-Nitrophenol	mg/kg	0.3 U	0.3 U	0.28 U	0.28 U	0.29 U	0.27 U	-	-	-	-	0.29 U	0.27 U	0.29 U	0.27 U	0.27 U	0.29 U	0.28 U
3&4-Methylphenol	mg/kg	0.3 U	0.3 U	0.28 U	0.28 U	0.29 U	0.27 U	-	-	-	-	0.29 U	0.27 U	0.29 U	0.27 U	0.27 U	0.29 U	0.28 U
3,3'-Dichlorobenzidine	mg/kg	1.8 U	1.8 U	1.7 U	1.7 U	1.8 U	1.7 U	-	-	-	-	1.8 U	1.6 U	1.7 U	1.7 U	1.7 U	1.8 U	1.7 U
3-Nitroaniline	mg/kg	0.22 U	0.23 U	0.21 U	0.21 U	0.22 U	0.21 U	-	-	-	-	0.22 U	0.2 U	0.22 U	0.21 U	0.21 U	0.22 U	0.21 U
4,6-Dinitro-2-methylphenol	mg/kg	0.17 U	0.17 U	0.16 U	0.16 U	0.17 U	0.16 U	-	-	-	-	0.17 U	0.15 U	0.16 U	0.16 U	0.15 U	0.17 U	0.16 U
4-Bromophenyl phenyl ether	mg/kg	0.3 U	0.3 U	0.28 U	0.28 U	0.29 U	0.27 U	-	-	-	-	0.29 U	0.27 U	0.29 U	0.27 U	0.27 U	0.29 U	0.28 U
4-Chloro-3-methylphenol	mg/kg	0.3 U	0.3 U	0.28 U	0.28 U	0.29 U	0.27 U	-	-	-	-	0.29 U	0.27 U	0.29 U	0.27 U	0.27 U	0.29 U	0.28 U
4-Chloroaniline	mg/kg	0.22 U	0.23 U	0.21 U	0.21 U	0.22 U	0.21 U	-	-	-	-	0.22 U	0.2 U	0.22 U	0.21 U	0.21 U	0.22 U	0.21 U
4-Chlorophenyl phenyl ether	mg/kg	0.3 U	0.3 U	0.28 U	0.28 U	0.29 U	0.27 U	-	-	-	-	0.29 U	0.27 U	0.29 U	0.27 U	0.27 U	0.29 U	0.28 U
4-Nitroaniline	mg/kg	0.22 U	0.23 U	0.21 U	0.21 U	0.22 U	0.21 U	-	-	-	-	0.22 U	0.2 U	0.22 U	0.21 U	0.21 U	0.22 U	0.21 U
4-Nitrophenol	mg/kg	0.37 U	0.37 U	0.35 U	0.35 U	0.37 U	0.34 U	-	-	-	-	0.37 U	0.33 U	0.36 U	0.34 U	0.34 U	0.37 U	0.35 U
Acenaphthene	mg/kg	0.019 J	0.3 U	0.28 U	0.28 U	0.033 J	0.27 U	-	-	-	-	0.29 U	0.068 J	0.28 J	0.27 U	0.27 U	0.29 U	0.28 U
Acenaphthylene	mg/kg	0.3 U	0.3 U	0.28 U	0.28 U	0.29 U	0.27 U	-	-	-	-	0.29 U	0.27 U	0.0091 J	0.27 U	0.27 U	0.29 U	0.28 U
Acetophenone	mg/kg	0.3 U	0.3 U	0.28 U	0.28 U	0.29 U	0.27 U	-	-	-	-	0.29 U	0.27 U	0.29 U	0.27 U	0.27 U	0.29 U	0.28 U
Anthracene	mg/kg	0.036 J	0.3 U	0.28 U	0.28 U	0.018 J	0.27 U	-	-	-	-	0.29 U	0.27 U	0.11 J	0.27 U	0.27 U	0.29 U	0.28 U
Atrazine	mg/kg	0.045 U	0.045 U	0.042 U	0.042 U	0.044 U	0.041 U	-	-	-	-	0.044 U	0.041 U	0.044 U	0.042 U	0.041 U	0.044 U	0.042 U
Benzaldehyde	mg/kg	0.3 U	0.3 U	0.28 U	0.28 U	0.29 U	0.27 U	-	-	-	-	0.29 U	0.27 U	0.29 U	0.27 U	0.27 U	0.29 U	0.28 U
Benzo(a)anthracene	mg/kg	0.11 J	0.3 U	0.28 U	0.28 U	0.039 J	0.27 U	-	-	-	-	0.0086 J	0.046 J	0.41	0.27 U	0.27 U	0.29 U	0.28 U
Benzo(a)pyrene	mg/kg	0.096 J	0.3 U	0.28 U	0.28 U	0.026 J	0.27 U	-	-	-	-	0.0091 J	0.031 J	0.27 J	0.27 U	0.27 U	0.29 U	0.28 U
Benzo(b)fluoranthene	mg/kg	0.13 J	0.3 U	0.28 U	0.28 U	0.036 J	0.27 U	-	-	-	-	0.0088 J	0.037 J	0.31	0.27 U	0.27 U	0.29 U	0.28 U
Benzo(g,h,i)perylene	mg/kg	0.061 J	0.3 U	0.28 U	0.28 U	0.017 J	0.27 U	-	-	-	-	0.0086 J	0.015 J	0.25 J	0.27 U	0.27 U	0.29 U	0.28 U
Benzo(k)fluoranthene	mg/kg	0.052 J	0.3 U	0.28 U	0.28 U	0.017 J	0.27 U	-	-	-	-	0.29 U	0.023 J	0.13 J	0.27 U	0.27 U	0.29 U	0.28 U
Biphenyl (1,1-Biphenyl)	mg/kg	0.3 U	0.3 U	0.28 U	0.28 U	0.29 U	0.27 U	-	-	-	-	0.29 U	0.27 U	0.049 J	0.27 U	0.27 U	0.29 U	0.28 U
bis(2-Chloroethoxy)methane	mg/kg	0.3 U	0.3 U	0.28 U	0.28 U	0.29 U	0.27 U	-	-	-	-	0.29 U	0.27 U	0.29 U	0.27 U	0.27 U	0.29 U	0.28 U
bis(2-Chloroethyl)ether	mg/kg	0.089 U	0.091 U	0.084 U	0.085 U	0.089 U	0.083 U	-	-	-	-	0.089 U	0.081 U	0.087 U	0.083 U	0.083 U	0.089 U	0.084 U
bis(2-Ethylhexyl)phthalate (DEHP)	mg/kg	0.028 J	0.034 J	0.03 J	0.28 U	0.29 U	0.27 U	-	-	-	-	0.073 J	0.27 U	0.27 J	0.044 J	0.024 J	0.29 U	0.02 J

TABLE 3.8

PART 201 CRITERIA EXCEEDANCES - SOIL
2013 RFI REPORT
FORMER GENERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation		*WEST02*	*WEST02*	*WEST02*	*WEST02*	*WEST02*	*WEST02*	*WEST02*	*WEST02*	*WEST02*	*WEST02*	*WEST02*	*WEST02*	*WEST02*	*WEST02*	*WEST02*	*WEST02*
Perimeter Status (1)		*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*Y*	*Y*
Sample Location		*CRA-721M*	*CRA-721M*	*CRA-722M*	*CRA-722M*	*CRA-731I*	*CRA-731I*	*CRA-732SB*	*CRA-732SB*	*CRA-737M*	*CRA-737M*	*CRA-810SB*	*CRA-810SB*	*CRA-811SB*	*CRA-811SB*	*CRA-811SB*	*CRA-726D*	*CRA-726D*
Sample Identification (SO-17358-)		*031912-CB-205*	*031912-CB-206*	*031912-CB-207*	*031912-CB-208*	*030112-DR-048*	*030112-DR-049*	*031212-CB-185*	*031212-CB-186*	*022912-DR-046*	*022912-DR-047*	*031212-CB-192*	*031212-CB-193*	*031212-CB-189*	*031212-CB-190*	*031212-CB-191*	*032012-DR-078*	*032012-DR-079*
Sample Date		*3/19/2012*	*3/19/2012*	*3/19/2012*	*3/19/2012*	*3/1/2012*	*3/1/2012*	*3/12/2012*	*3/12/2012*	*2/29/2012*	*2/29/2012*	*3/12/2012*	*3/12/2012*	*3/12/2012*	*3/12/2012*	*3/12/2012*	*3/20/2012*	*3/20/2012*
Sample Depth		*(0-2) ft BGS*	*(3-5) ft BGS*	*(0-2) ft BGS*	*(6-8) ft BGS*	*(1-3) ft BGS*	*(6-8) ft BGS*	*(1-3) ft BGS*	*(6.5-8.5) ft BGS*	*(1-2) ft BGS*	*(5-7) ft BGS*	*(1.5-3.5) ft BGS*	*(7-9) ft BGS*	*(1-3) ft BGS*	*(5.5-7.5) ft BGS*	*(5.5-7.5) ft BGS*	*(0-2) ft BGS*	*(6.5-8.5) ft BGS*
Sample Type																*Duplicate*		
	Units																	
SVOCs Continued																		
Butyl benzylphthalate (BBP)	mg/kg	0.3 U	0.3 U	0.28 U	0.28 U	0.29 U	0.27 U	-	-	-	-	0.29 U	0.27 U	0.29 U	0.27 U	0.27 U	0.29 U	0.28 U
Caprolactam	mg/kg	0.3 U	0.3 U	0.28 U	0.28 U	0.29 U	0.27 U	-	-	-	-	0.29 U	0.27 U	0.29 U	0.27 U	0.27 U	0.29 U	0.28 U
Carbazole	mg/kg	0.3 U	0.3 U	0.28 U	0.28 U	0.29 U	0.27 U	-	-	-	-	0.29 U	0.27 U	0.079 J	0.27 U	0.27 U	0.29 U	0.28 U
Chrysene	mg/kg	0.12 J	0.0062 J	0.28 U	0.28 U	0.039 J	0.27 U	-	-	-	-	0.014 J	0.088 J	0.42	0.01 J	0.013 J	0.29 U	0.28 U
Dibenz(a,h)anthracene	mg/kg	0.017 J	0.3 U	0.28 U	0.28 U	0.29 U	0.27 U	-	-	-	-	0.29 U	0.27 U	0.29 U	0.27 U	0.27 U	0.29 U	0.28 U
Dibenzofuran	mg/kg	0.0068 J	0.3 U	0.28 U	0.28 U	0.03 J	0.27 U	-	-	-	-	0.29 U	0.03 J	0.2 J	0.27 U	0.27 U	0.29 U	0.28 U
Diethyl phthalate	mg/kg	0.3 U	0.3 U	0.28 U	0.28 U	0.29 U	0.27 U	-	-	-	-	0.29 U	0.27 U	0.29 U	0.27 U	0.27 U	0.29 U	0.28 U
Dimethyl phthalate	mg/kg	0.3 U	0.3 U	0.28 U	0.28 U	0.29 U	0.27 U	-	-	-	-	0.29 U	0.27 U	0.29 U	0.27 U	0.27 U	0.29 U	0.28 U
Di-n-butylphthalate (DBP)	mg/kg	0.3 U	0.3 U	0.28 U	0.28 U	0.29 U	0.27 U	-	-	-	-	0.29 U	0.27 U	0.29 U	0.27 U	0.27 U	0.29 U	0.28 U
Di-n-octyl phthalate (DnOP)	mg/kg	0.3 U	0.3 U	0.28 U	0.28 U	0.29 U	0.27 U	-	-	-	-	0.29 U	0.27 U	0.29 U	0.27 U	0.27 U	0.29 U	0.28 U
Fluoranthene	mg/kg	0.25 J	0.3 U	0.28 U	0.28 U	0.11 J	0.27 U	-	-	-	-	0.027 J	0.13 J	1.5	0.015 J	0.27 U	0.29 U	0.28 U
Fluorene	mg/kg	0.014 J	0.3 U	0.28 U	0.28 U	0.012 J	0.27 U	-	-	-	-	0.29 U	0.079 J	0.31	0.27 U	0.27 U	0.29 U	0.28 U
Hexachlorobenzene	mg/kg	0.3 U	0.3 U	0.28 U	0.28 U	0.29 U	0.27 U	-	-	-	-	0.29 U	0.27 U	0.29 U	0.27 U	0.27 U	0.29 U	0.28 U
Hexachlorobutadiene	mg/kg	0.045 U	0.045 U	0.042 U	0.042 U	0.044 U	0.041 U	-	-	-	-	0.044 U	0.041 U	0.044 U	0.042 U	0.041 U	0.044 U	0.042 U
Hexachlorocyclopentadiene	mg/kg	0.3 U	0.3 U	0.28 U	0.28 U	0.29 U	0.27 U	-	-	-	-	0.29 U	0.27 U	0.29 U	0.27 U	0.27 U	0.29 U	0.28 U
Hexachloroethane	mg/kg	0.3 U	0.3 U	0.28 U	0.28 U	0.29 U	0.27 U	-	-	-	-	0.29 U	0.27 U	0.29 U	0.27 U	0.27 U	0.29 U	0.28 U
Indeno(1,2,3-cd)pyrene	mg/kg	0.051 J	0.3 U	0.28 U	0.28 U	0.015 J	0.27 U	-	-	-	-	0.29 U	0.0047 J	0.24 J	0.27 U	0.27 U	0.29 U	0.28 U
Isophorone	mg/kg	0.3 U	0.3 U	0.28 U	0.28 U	0.29 U	0.27 U	-	-	-	-	0.29 U	0.27 U	0.29 U	0.27 U	0.27 U	0.29 U	0.28 U
Naphthalene	mg/kg	0.3 U	0.3 U	0.28 U	0.28 U	0.13 J	0.27 U	-	-	-	-	0.01 J	0.0096 J	0.26 J	0.27 U	0.27 U	0.29 U	0.28 U
Nitrobenzene	mg/kg	0.3 U	0.3 U	0.28 U	0.28 U	0.29 U	0.27 U	-	-	-	-	0.29 U	0.27 U	0.29 U	0.27 U	0.27 U	0.29 U	0.28 U
N-Nitrosodi-n-propylamine	mg/kg	0.3 U	0.3 U	0.28 U	0.28 U	0.29 U	0.27 U	-	-	-	-	0.29 U	0.27 U	0.29 U	0.27 U	0.27 U	0.29 U	0.28 U
N-Nitrosodiphenylamine	mg/kg	0.3 U	0.3 U	0.28 U	0.28 U	0.29 U	0.27 U	-	-	-	-	0.29 U	0.27 U	0.29 U	0.27 U	0.27 U	0.29 U	0.28 U
Pentachlorophenol	mg/kg	0.17 U	0.17 U	0.16 U	0.16 U	0.17 U	0.16 U	-	-	-	-	0.17 U	0.15 U	0.16 U	0.16 U	0.15 U	0.17 U	R
Phenanthrene	mg/kg	0.14 J	0.3 U	0.28 U	0.28 U	0.13 J	0.009 J	-	-	-	-	0.018 J	0.36	1.3	0.021 J	0.01 J	0.29 U	0.28 U
Phenol	mg/kg	0.3 U	0.3 U	0.28 U	0.28 U	0.29 U	0.27 U	-	-	-	-	0.29 U	0.27 U	0.29 U	0.27 U	0.27 U	0.29 U	0.28 U
Pyrene	mg/kg	0.2 J	0.3 U	0.28 U	0.28 U	0.084 J	0.0035 J	-	-	-	-	0.019 J	0.15 J	1.8	0.012 J	0.0067 J	0.29 U	0.28 U
Metals																		
Aluminum	mg/kg	4900	4800	2100	1300	5600	2500	-	-	-	-	4000	1900	5700	2300	2500	4800	1400
Antimony	mg/kg	0.23	0.078 J	0.11 J	0.048 J	0.057 J	0.058 J	-	-	-	-	0.043 J	0.072 J	1.6	0.063 J	0.078 J	0.042 J	0.038 J
Arsenic	mg/kg	**6.9**[cd]	4.6	2.9	1.8	3	4.7	-	-	-	-	3.7	3.3	**95**[cdq]	2.4	2.9	2	1.6
Barium	mg/kg	55	25	6.3	4.3	28	9.6	-	-	-	-	32	7.8	29	7.6	9.9	21	5
Beryllium	mg/kg	0.15 J	0.081 J	0.14 U	0.15 U	0.17 U	0.13 U	-	-	-	-	0.062 J	0.16 U	0.13 J	0.14 U	0.15 U	0.15 U	0.16 U
Cadmium	mg/kg	0.24	0.068 J	0.095	0.066 J	0.085 U	0.053 J	-	-	-	-	0.055 J	0.08	0.078 U	0.096	0.063 J	0.08	0.068 J
Calcium	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chromium	mg/kg	10	7.6	4.8	2.8	10	11	7.3	5.8	11	8.2	8.6	4.5	13	6.7	6.2	6.6	4.1
Chromium III (trivalent)	mg/kg	-	-	-	-	-	-	6.8	5.1	11	8.2	-	-	-	-	-	6.6	4.1
Chromium VI (hexavalent)	mg/kg	-	-	-	-	-	-	0.52 J	0.79 J	0.86 UJ	0.86 UJ	-	-	-	-	-	0.89 U	0.84 U
Cobalt	mg/kg	**7.3**[cd]	3.5	2.4	1.4	4.6	3.2	-	-	-	-	4	2.9	**34**[cd]	2.6	3.1	2.5	1.7
Copper	mg/kg	15	8.4	9.3	4.6	6	9.8	-	-	-	-	7.2	12	45	9.1	10	3.1	3.6
Iron	mg/kg	12000	10000	6000	3800	10000	7700	-	-	-	-	8800	6600	**31000**[c]	5300	6300	6900	4400
Lead	mg/kg	9.2	6	3.5	2.3	6.6	4.2	-	-	-	-	5.5	9.8	140	3	4.1	3.5	2.1
Lead - coarse fraction	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lead - fine fraction	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lead - total (calculated by fine/coarse fraction)	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Magnesium	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

TABLE 3.8

PART 201 CRITERIA EXCEEDANCES - SOIL
2013 RFI REPORT
FORMER GENERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation		WEST02	WEST02	WEST02	WEST02	WEST02	WEST02	WEST02	WEST02	WEST02	WEST02	WEST02	WEST02	WEST02	WEST02	WEST02	WEST02	WEST02
Perimeter Status (1)		N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	Y	Y
Sample Location		CRA-721M	CRA-721M	CRA-722M	CRA-722M	CRA-731I	CRA-731I	CRA-732SB	CRA-732SB	CRA-737M	CRA-737M	CRA-810SB	CRA-810SB	CRA-811SB	CRA-811SB	CRA-811SB	CRA-726D	CRA-726D
Sample Identification (SO-17358-)		031912-CB-205	031912-CB-206	031912-CB-207	031912-CB-208	030112-DR-048	030112-DR-049	031212-CB-185	031212-CB-186	022912-DR-046	022912-DR-047	031212-CB-192	031212-CB-193	031212-CB-189	031212-CB-190	031212-CB-191	032012-DR-078	032012-DR-079
Sample Date		3/19/2012	3/19/2012	3/19/2012	3/19/2012	3/1/2012	3/1/2012	3/12/2012	3/12/2012	2/29/2012	2/29/2012	3/12/2012	3/12/2012	3/12/2012	3/12/2012	3/12/2012	3/20/2012	3/20/2012
Sample Depth		(0-2) ft BGS	(3-5) ft BGS	(0-2) ft BGS	(6-8) ft BGS	(1-3) ft BGS	(6-8) ft BGS	(1-3) ft BGS	(6.5-8.5) ft BGS	(1-2) ft BGS	(5-7) ft BGS	(1.5-3.5) ft BGS	(7-9) ft BGS	(1-3) ft BGS	(5.5-7.5) ft BGS	(5.5-7.5) ft BGS	(0-2) ft BGS	(6.5-8.5) ft BGS
Sample Type																Duplicate		
	Units																	
Metals Continued																		
Manganese	mg/kg	700[cd]	190	180	68	180 J	260 J	-	-	-	-	250	230	250	150	270	71	120
Mercury	mg/kg	0.05 U	0.045 U	0.029 J	0.044 U	0.049	0.031 J	-	-	-	-	0.022 J	0.036 U	0.036 J	0.04 U	0.037 U	0.045 U	0.043 U
Nickel	mg/kg	15	9	6.8	4.2	8.8	11	-	-	-	-	9.1	8.7	64	7.9	8.6	6.2	4.8
Potassium	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Selenium	mg/kg	0.34 J	0.24 J	0.16 J	0.13 J	0.3	0.36	-	-	-	-	0.35	0.45[d]	0.81[d]	0.33	0.42[d]	0.16 J	0.099 J
Silver	mg/kg	0.023 J	0.014 J	0.069 U	0.075 U	0.16	0.066 U	-	-	-	-	0.08 U	0.054 J	0.079	0.07 U	0.076 U	0.073 U	0.082 U
Sodium	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Thallium	mg/kg	0.22 U	0.14 U	0.1 U	0.075 U	0.11	0.16	-	-	-	-	0.11 U	0.16 U	0.13 U	0.086 U	0.13 U	0.073 U	0.082 U
Vanadium	mg/kg	15	13	7.6	4.5	14	9.3	-	-	-	-	13	9.3	18	8	8.7	9.2	5.8
Zinc	mg/kg	29	24	16	12	29	22	-	-	-	-	23	16	30	21	19	15	12
Polychlorinated biphenyls (PCBs)																		
Aroclor-1016 (PCB-1016)	mg/kg	0.037 U	0.037 U	0.035 U	0.035 U	0.036 U	0.034 U	-	-	-	-	0.037 U	0.033 U	0.36 U	0.034 U	0.034 U	0.037 U	0.035 U
Aroclor-1221 (PCB-1221)	mg/kg	0.037 U	0.037 U	0.035 U	0.035 U	0.036 U	0.034 U	-	-	-	-	0.037 U	0.033 U	0.36 U	0.034 U	0.034 U	0.037 U	0.035 U
Aroclor-1232 (PCB-1232)	mg/kg	0.037 U	0.037 U	0.035 U	0.035 U	0.036 U	0.034 U	-	-	-	-	0.037 U	0.033 U	0.36 U	0.034 U	0.034 U	0.037 U	0.035 U
Aroclor-1242 (PCB-1242)	mg/kg	0.037 U	0.037 U	0.035 U	0.035 U	0.036 U	0.034 U	-	-	-	-	0.037 U	0.033 U	0.36 U	0.034 U	0.034 U	0.037 U	0.035 U
Aroclor-1248 (PCB-1248)	mg/kg	0.037 U	0.037 U	0.035 U	0.035 U	0.036 U	0.034 U	-	-	-	-	0.037 U	0.033 U	0.36 U	0.034 U	0.034 U	0.037 U	0.035 U
Aroclor-1254 (PCB-1254)	mg/kg	0.037 U	0.037 U	0.035 U	0.035 U	0.036 U	0.034 U	-	-	-	-	0.037 U	0.033 U	0.36 U	0.034 U	0.034 U	0.037 U	0.035 U
Aroclor-1260 (PCB-1260)	mg/kg	0.037 U	0.037 U	0.035 U	0.035 U	0.036 U	0.034 U	-	-	-	-	0.037 U	0.033 U	0.36 U	0.034 U	0.034 U	0.037 U	0.035 U
Aroclor-1262 (PCB-1262)	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Aroclor-1268 (PCB-1268)	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total PCBs	mg/kg	ND	ND	ND	ND	ND	ND	-	-	-	-	ND	ND	ND	ND	ND	ND	ND

Notes

Michigan Part 201 generic clean up criteria (updated September 28, 2012)

ID - Insufficient data to develop criterion

NLV - Hazardous substance is not likely to volatilize under most conditions

NA - Criterion or value is not available

Perimeter Status (1) - N - non-perimeter, Y - perimeter

mg/kg - milligram/kilogram

Notes:

U - Not detected at the associated reporting limit.

J - Estimated concentration.

UJ - Not detected; associated reporting limit is estimated.

R - Rejected

TABLE 3.8

PART 201 CRITERIA EXCEEDANCES - SOIL
2013 RFI REPORT
FORMER GENERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation		*WEST02*	*WEST02*	*WEST02*	*WEST02*	*WEST03*	*WEST03*	*WEST03*	*WEST03*	*WEST03*	*WEST03*	*WEST03*	*WEST03*	*WEST03*	*WEST03*	*WEST03*	*WEST03*
Perimeter Status (1)		*Y*	*Y*	*Y*	*Y*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*
Sample Location		*CRA-726M*	*CRA-726M*	*CRA-726SB*	*CRA-726SB*	*CRA-724I*	*CRA-724I*	*CRA-730SB*	*CRA-730SB*	*CRA-730SB*	*CRA-730SB*	*CRA-739SB*	*CRA-739SB*	*CRA-787I*	*CRA-787I*	*CRA-809SB*	*CRA-809SB*	*CRA-839SB*	*CRA-839SB*
Sample Identification (SO-17358-)		*032012-CB-211*	*032012-CB-212*	*032012-CB-209*	*032012-CB-210*	*031212-DR-064*	*031212-DR-065*	*030112-DR-050*	*030112-DR-051*	*030112-DR-052*	*030812-CB-161*	*030812-CB-162*	*030212-DR-053*	*030212-DR-054*	*032312-CB-247*	*032312-CB-248*	*032113-DR-019*	*032113-DR-020*
Sample Date		*3/20/2012*	*3/20/2012*	*3/20/2012*	*3/20/2012*	*3/12/2012*	*3/12/2012*	*3/1/2012*	*3/1/2012*	*3/1/2012*	*3/8/2012*	*3/8/2012*	*3/2/2012*	*3/2/2012*	*3/23/2012*	*3/23/2012*	*3/21/2013*	*3/21/2013*
Sample Depth		*(0-2) ft BGS*	*(8-10) ft BGS*	*(0-2) ft BGS*	*(6.5-8.5) ft BGS*	*(0-2) ft BGS*	*(6-8) ft BGS*	*(1-3) ft BGS*	*(4-6) ft BGS*	*(7-9) ft BGS*	*(2.75-4.75) ft BGS*	*(7-9) ft BGS*	*(2-4) ft BGS*	*(6-8) ft BGS*	*(1.25-3.25) ft BGS*	*(7.5-9.5) ft BGS*	*(0-2) ft BGS*	*(2-4) ft BGS*
Sample Type																		
	Units																	
Volatile Organic Compounds (VOCs)																		
1,1,1-Trichloroethane	mg/kg	0.043 U	0.042 U	0.046 U	0.038 U	0.043 U	0.045 U	-	0.044 U	-	-	-	0.041 U	0.042 U	0.043 U	0.037 U	-	-
1,1,2,2-Tetrachloroethane	mg/kg	0.043 U	0.042 U	0.046 U	0.038 U	0.043 U	0.045 U	-	0.044 U	-	-	-	0.041 U	0.042 U	0.043 U	0.037 U	-	-
1,1,2-Trichloroethane	mg/kg	0.043 U	0.042 U	0.046 U	0.038 U	0.043 U	0.045 U	-	0.044 U	-	-	-	0.041 U	0.042 U	0.043 U	0.037 U	-	-
1,1-Dichloroethane	mg/kg	0.043 U	0.042 U	0.046 U	0.038 U	0.043 U	0.045 U	-	0.044 U	-	-	-	0.041 U	0.042 U	0.043 U	0.037 U	-	-
1,1-Dichloroethene	mg/kg	0.043 U	0.042 U	0.046 U	0.038 U	0.043 U	0.045 U	-	0.044 U	-	-	-	0.041 U	0.042 U	0.043 U	0.037 U	-	-
1,2,4-Trichlorobenzene	mg/kg	0.21 U	0.21 U	0.23 U	0.19 U	0.21 U	0.23 U	-	0.22 U	-	-	-	0.043 J	0.032 J	0.21 U	0.027 J	-	-
1,2-Dibromo-3-chloropropane (DBCP)	mg/kg	0.21 U	0.21 U	0.23 U	0.19 U	0.21 U	0.23 U	-	0.22 U	-	-	-	0.21 U	0.21 U	0.21 U	0.19 U	-	-
1,2-Dibromoethane (Ethylene dibromide)	mg/kg	0.21 U	0.21 U	0.23 U	0.19 U	0.21 U	0.23 U	-	0.22 U	-	-	-	0.21 U	0.21 U	0.21 U	0.19 U	-	-
1,2-Dichlorobenzene	mg/kg	0.086 U	0.085 U	0.092 U	0.077 U	0.086 U	0.091 U	-	0.087 U	-	-	-	0.083 U	0.084 U	0.086 U	0.075 U	-	-
1,2-Dichloroethane	mg/kg	0.043 U	0.042 U	0.046 U	0.038 U	0.043 U	0.045 U	-	0.044 U	-	-	-	0.041 U	0.042 U	0.043 U	0.037 U	-	-
1,2-Dichloropropane	mg/kg	0.043 U	0.042 U	0.046 U	0.038 U	0.043 U	0.045 U	-	0.044 U	-	-	-	0.041 U	0.042 U	0.043 U	0.037 U	-	-
1,3-Dichlorobenzene	mg/kg	0.086 U	0.085 U	0.092 U	0.077 U	0.086 U	0.091 U	-	0.087 U	-	-	-	0.083 U	0.084 U	0.086 U	0.075 U	-	-
1,4-Dichlorobenzene	mg/kg	0.086 U	0.085 U	0.092 U	0.077 U	0.086 U	0.091 U	-	0.087 U	-	-	-	0.083 U	0.084 U	0.086 U	0.075 U	-	-
2-Butanone (Methyl ethyl ketone) (MEK)	mg/kg	0.64 U	0.64 U	0.69 U	0.58 U	0.64 U	0.68 U	-	0.65 U	-	-	-	0.62 U	0.63 U	0.64 U	0.56 U	-	-
2-Hexanone	mg/kg	2.1 U	2.1 U	2.3 U	1.9 U	2.1 U	2.3 U	-	2.2 U	-	-	-	2.1 U	2.1 U	2.1 U	1.9 U	-	-
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	mg/kg	2.1 U	2.1 U	2.3 U	1.9 U	2.1 U	2.3 U	-	2.2 U	-	-	-	0.44 J	2.1 U	2.1 U	1.9 U	-	-
Acetone	mg/kg	0.64 U	0.64 U	0.69 U	0.58 U	0.64 U	0.68 U	-	0.65 U	-	-	-	0.62 U	0.63 U	0.64 U	0.56 U	-	-
Benzene	mg/kg	0.043 U	0.042 U	0.046 U	0.038 U	0.043 U	0.045 U	-	0.044 U	-	-	-	0.041 U	0.042 U	0.043 U	0.037 U	-	-
Bromodichloromethane	mg/kg	0.086 U	0.085 U	0.092 U	0.077 U	0.086 U	0.091 U	-	0.087 U	-	-	-	0.083 U	0.084 U	0.086 U	0.075 U	-	-
Bromoform	mg/kg	0.086 U	0.085 U	0.092 U	0.077 U	0.086 U	0.091 U	-	0.087 U	-	-	-	0.083 U	0.084 U	0.086 U	0.075 U	-	-
Bromomethane (Methyl bromide)	mg/kg	0.21 U	0.21 U	0.23 U	0.19 U	0.21 U	0.23 U	-	0.22 U	-	-	-	R	R	0.21 U	0.19 U	-	-
Carbon disulfide	mg/kg	0.21 U	0.21 U	0.23 U	0.19 U	0.21 U	0.23 U	-	0.22 U	-	-	-	0.21 U	0.21 U	0.21 U	0.19 U	-	-
Carbon tetrachloride	mg/kg	0.043 U	0.042 U	0.046 U	0.038 U	0.043 U	0.045 U	-	0.044 U	-	-	-	0.041 U	0.042 U	0.043 U	0.037 U	-	-
Chlorobenzene	mg/kg	0.043 U	0.042 U	0.046 U	0.038 U	0.043 U	0.045 U	-	0.044 U	-	-	-	0.041 U	0.042 U	0.043 U	0.037 U	-	-
Chloroethane	mg/kg	0.21 U	0.21 U	0.23 U	0.19 U	0.21 U	0.23 U	-	0.22 U	-	-	-	0.21 U	0.21 U	0.21 U	0.19 U	-	-
Chloroform (Trichloromethane)	mg/kg	0.043 U	0.042 U	0.046 U	0.038 U	0.043 U	0.045 U	-	0.044 U	-	-	-	0.041 U	0.042 U	0.043 U	0.037 U	-	-
Chloromethane (Methyl chloride)	mg/kg	0.21 U	0.21 U	0.23 U	0.19 U	0.21 U	0.23 U	-	0.22 U	-	-	-	0.21 U	0.21 U	0.21 U	0.19 U	-	-
cis-1,2-Dichloroethene	mg/kg	0.043 U	0.042 U	0.046 U	0.038 U	0.043 U	0.045 U	-	0.044 U	-	-	-	0.041 U	0.042 U	0.043 U	0.066	-	-
cis-1,3-Dichloropropene	mg/kg	0.043 U	0.042 U	0.046 U	0.038 U	0.043 U	0.045 U	-	0.044 U	-	-	-	0.041 U	0.042 U	0.043 U	0.037 U	-	-
Cyclohexane	mg/kg	1 U	1 U	1.1 U	0.92 U	1 U	1.1 U	-	1 U	-	-	-	0.99 U	1 U	1 U	0.9 U	-	-
Dibromochloromethane	mg/kg	0.043 U	0.042 U	0.046 U	0.038 U	0.043 U	0.045 U	-	0.044 U	-	-	-	0.041 U	0.042 U	0.043 U	0.037 U	-	-
Dichlorodifluoromethane (CFC-12)	mg/kg	0.086 U	0.085 U	0.092 U	0.077 U	0.086 U	0.091 U	-	0.087 U	-	-	-	0.083 U	0.084 U	0.086 U	0.075 U	-	-
Ethylbenzene	mg/kg	0.043 U	0.042 U	0.046 U	0.038 U	0.043 U	0.045 U	-	0.044 U	-	-	-	0.041 U	0.042 U	0.043 U	0.0088 J	-	-
Isopropyl benzene	mg/kg	0.21 U	0.21 U	0.23 U	0.19 U	0.21 U	0.23 U	-	0.22 U	-	-	-	0.21 U	0.21 U	0.21 U	0.022 J	-	-
Methyl acetate	mg/kg	1 U	1 U	1.1 U	0.92 U	1 U	1.1 U	-	1 U	-	-	-	0.99 U	0.027 J	1 U	0.9 U	-	-
Methyl cyclohexane	mg/kg	1 U	1 U	1.1 U	0.92 U	1 U	1.1 U	-	1 U	-	-	-	0.02 J	1 U	1 U	0.02 J	-	-
Methyl tert butyl ether (MTBE)	mg/kg	0.21 U	0.21 U	0.23 U	0.19 U	0.21 U	0.23 U	-	0.22 U	-	-	-	0.21 U	0.21 U	0.21 U	0.19 U	-	-
Methylene chloride	mg/kg	0.21 U	0.21 U	0.23 U	0.19 U	0.21 U	0.23 U	-	0.22 U	-	-	-	0.21 U	0.21 U	0.21 U	0.19 U	-	-
Styrene	mg/kg	0.043 U	0.042 U	0.046 U	0.038 U	0.043 U	0.045 U	-	0.044 U	-	-	-	0.041 U	0.042 U	0.043 U	0.037 U	-	-
Tetrachloroethene	mg/kg	0.043 U	0.042 U	0.046 U	0.038 U	0.043 U	0.045 U	-	0.044 U	-	-	-	0.041 U	0.042 U	0.043 U	0.037 U	-	-
Toluene	mg/kg	0.086 U	0.085 U	0.092 U	0.077 U	0.086 U	0.091 U	-	0.087 U	-	-	-	0.083 U	0.084 U	0.086 U	0.075 U	-	-
trans-1,2-Dichloroethene	mg/kg	0.043 U	0.042 U	0.046 U	0.038 U	0.043 U	0.045 U	-	0.044 U	-	-	-	0.041 U	0.042 U	0.043 U	0.037 U	-	-
trans-1,3-Dichloropropene	mg/kg	0.043 U	0.042 U	0.046 U	0.038 U	0.043 U	0.045 U	-	0.044 U	-	-	-	0.041 U	0.042 U	0.043 U	0.037 U	-	-
Trichloroethene	mg/kg	0.043 U	0.042 U	0.046 U	0.038 U	0.043 U	0.045 U	-	0.044 U	-	-	-	0.041 U	0.042 U	0.043 U	0.037 U	-	-

TABLE 3.8

PART 201 CRITERIA EXCEEDANCES - SOIL
2013 RFI REPORT
FORMER GENERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation		*WEST02*	*WEST02*	*WEST02*	*WEST02*	*WEST03*	*WEST03*	*WEST03*	*WEST03*	*WEST03*	*WEST03*	*WEST03*	*WEST03*	*WEST03*	*WEST03*	*WEST03*	*WEST03*
Perimeter Status (1)		*Y*	*Y*	*Y*	*Y*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*
Sample Location		*CRA-726M*	*CRA-726M*	*CRA-726SB*	*CRA-726SB*	*CRA-724I*	*CRA-724I*	*CRA-730SB*	*CRA-730SB*	*CRA-730SB*	*CRA-739SB*	*CRA-739SB*	*CRA-787I*	*CRA-787I*	*CRA-809SB*	*CRA-809SB*	*CRA-839SB*	*CRA-839SB*
Sample Identification (SO-17358-)		*032012-CB-211*	*032012-CB-212*	*032012-CB-209*	*032012-CB-210*	*031212-DR-064*	*031212-DR-065*	*030112-DR-050*	*030112-DR-051*	*030112-DR-052*	*030812-CB-161*	*030812-CB-162*	*030212-DR-053*	*030212-DR-054*	*032312-CB-247*	*032312-CB-248*	*032113-DR-019*	*032113-DR-020*
Sample Date		*3/20/2012*	*3/20/2012*	*3/20/2012*	*3/20/2012*	*3/12/2012*	*3/12/2012*	*3/1/2012*	*3/1/2012*	*3/1/2012*	*3/8/2012*	*3/8/2012*	*3/2/2012*	*3/2/2012*	*3/23/2012*	*3/23/2012*	*3/21/2013*	*3/21/2013*
Sample Depth		*(0-2) ft BGS*	*(8-10) ft BGS*	*(0-2) ft BGS*	*(6.5-8.5) ft BGS*	*(0-2) ft BGS*	*(6-8) ft BGS*	*(1-3) ft BGS*	*(4-6) ft BGS*	*(7-9) ft BGS*	*(2.75-4.75) ft BGS*	*(7-9) ft BGS*	*(2-4) ft BGS*	*(6-8) ft BGS*	*(1.25-3.25) ft BGS*	*(7.5-9.5) ft BGS*	*(0-2) ft BGS*	*(2-4) ft BGS*
Sample Type																		
	Units																	
VOCs Continued																		
Trichlorofluoromethane (CFC-11)	mg/kg	0.086 U	0.085 U	0.092 U	0.077 U	0.086 U	0.091 U	-	0.087 U	-	-	-	0.083 U	0.084 U	0.086 U	0.075 U	-	-
Trifluorotrichloroethane (Freon 113)	mg/kg	0.21 U	0.21 U	0.23 U	0.19 U	0.21 U	0.23 U	-	0.22 U	-	-	-	0.21 U	0.21 U	0.21 U	0.19 U	-	-
Vinyl chloride	mg/kg	0.034 U	0.034 U	0.037 U	0.031 U	0.034 U	0.036 U	-	0.035 U	-	-	-	0.033 U	0.034 U	0.034 U	0.03 U	-	-
Xylenes (total)	mg/kg	0.13 U	0.13 U	0.14 U	0.12 U	0.13 U	0.14 U	-	0.13 U	-	-	-	0.12 U	0.13 U	0.012 J	0.29	-	-
Semi-Volatile Organic Compounds (SVOCs)																		
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	mg/kg	0.29 U	0.28 U	0.28 U	0.27 U	0.3 U	0.28 U	-	28 U	-	-	-	27 U	27 U	0.29 U	27 U	-	-
2,4,5-Trichlorophenol	mg/kg	0.29 U	0.28 U	0.28 U	0.27 U	0.3 U	0.28 U	-	28 U	-	-	-	27 U	27 U	0.29 U	27 U	-	-
2,4,6-Trichlorophenol	mg/kg	0.29 U	0.28 U	0.28 U	0.27 U	0.3 U	0.28 U	-	28 U	-	-	-	27 U	27 U	0.29 U	27 U	-	-
2,4-Dichlorophenol	mg/kg	0.29 U	0.28 U	0.28 U	0.27 U	0.3 U	0.28 U	-	28 U	-	-	-	27 U	27 U	0.29 U	27 U	-	-
2,4-Dimethylphenol	mg/kg	0.29 U	0.28 U	0.28 U	0.27 U	0.3 U	0.28 U	-	28 U	-	-	-	27 U	27 U	0.29 U	27 U	-	-
2,4-Dinitrophenol	mg/kg	0.16 U	0.16 U	0.16 U	0.16 U	0.17 U	0.16 U	-	16 U	-	-	-	16 U	16 U	0.16 U	15 U	-	-
2,4-Dinitrotoluene	mg/kg	0.29 U	0.28 U	0.28 U	0.27 U	0.3 U	0.28 U	-	28 U	-	-	-	27 U	27 U	0.29 U	27 U	-	-
2,6-Dinitrotoluene	mg/kg	0.29 U	0.28 U	0.28 U	0.27 U	0.3 U	0.28 U	-	28 U	-	-	-	27 U	27 U	0.29 U	27 U	-	-
2-Chloronaphthalene	mg/kg	0.29 U	0.28 U	0.28 U	0.27 U	0.3 U	0.28 U	-	28 U	-	-	-	27 U	27 U	0.29 U	27 U	-	-
2-Chlorophenol	mg/kg	0.29 U	0.28 U	0.28 U	0.27 U	0.3 U	0.28 U	-	28 U	-	-	-	27 U	27 U	0.29 U	27 U	-	-
2-Methylnaphthalene	mg/kg	0.29 U	0.28 U	0.28 U	0.27 U	0.3 U	0.28 U	-	28 U	-	-	-	27 U	27 U	0.0098 J	27 U	-	-
2-Methylphenol	mg/kg	0.29 U	0.28 U	0.28 U	0.27 U	0.3 U	0.28 U	-	28 U	-	-	-	27 U	27 U	0.29 U	27 U	-	-
2-Nitroaniline	mg/kg	0.22 U	0.21 U	0.21 U	0.21 U	0.23 U	0.21 U	-	22 U	-	-	-	21 U	21 U	0.22 U	21 U	-	-
2-Nitrophenol	mg/kg	0.29 U	0.28 U	0.28 U	0.27 U	0.3 U	0.28 U	-	28 U	-	-	-	27 U	27 U	0.29 U	27 U	-	-
3&4-Methylphenol	mg/kg	0.29 U	0.28 U	0.28 U	0.27 U	0.3 U	0.28 U	-	28 U	-	-	-	**2.1 J[d]**	27 U	0.29 U	27 U	-	-
3,3'-Dichlorobenzidine	mg/kg	1.7 U	1.7 U	1.7 U	1.7 U	1.8 U	1.7 U	-	170 U	-	-	-	170 U	170 U	1.7 U	160 U	-	-
3-Nitroaniline	mg/kg	0.22 U	0.21 U	0.21 U	0.21 U	0.23 U	0.21 U	-	22 U	-	-	-	21 U	21 U	0.22 U	21 U	-	-
4,6-Dinitro-2-methylphenol	mg/kg	0.16 U	0.16 U	0.16 U	0.16 U	0.17 U	0.16 U	-	16 U	-	-	-	16 U	16 U	0.16 U	15 U	-	-
4-Bromophenyl phenyl ether	mg/kg	0.29 U	0.28 U	0.28 U	0.27 U	0.3 U	0.28 U	-	28 U	-	-	-	27 U	27 U	0.29 U	27 U	-	-
4-Chloro-3-methylphenol	mg/kg	0.29 U	0.28 U	0.28 U	0.27 U	0.3 U	0.28 U	-	28 U	-	-	-	27 U	27 U	0.29 U	27 U	-	-
4-Chloroaniline	mg/kg	0.22 U	0.21 U	0.21 U	0.21 U	0.23 U	0.21 U	-	22 U	-	-	-	21 U	21 U	0.22 U	21 U	-	-
4-Chlorophenyl phenyl ether	mg/kg	0.29 U	0.28 U	0.28 U	0.27 U	0.3 U	0.28 U	-	28 U	-	-	-	27 U	27 U	0.29 U	27 U	-	-
4-Nitroaniline	mg/kg	0.22 U	0.21 U	0.21 U	0.21 U	0.23 U	0.21 U	-	22 U	-	-	-	21 U	21 U	0.22 U	21 U	-	-
4-Nitrophenol	mg/kg	0.36 U	0.35 U	0.34 U	0.34 U	0.37 U	0.35 U	-	36 U	-	-	-	34 U	34 U	0.36 U	34 U	-	-
Acenaphthene	mg/kg	0.29 U	0.28 U	0.28 U	0.27 U	0.3 U	0.28 U	-	28 U	-	-	-	27 U	27 U	0.0085 J	27 U	-	-
Acenaphthylene	mg/kg	0.29 U	0.28 U	0.28 U	0.27 U	0.3 U	0.28 U	-	28 U	-	-	-	27 U	27 U	0.29 U	27 U	-	-
Acetophenone	mg/kg	0.29 U	0.28 U	0.28 U	0.27 U	0.3 U	0.28 U	-	28 U	-	-	-	27 U	27 U	0.29 U	27 U	-	-
Anthracene	mg/kg	0.29 U	0.28 U	0.28 U	0.27 U	0.3 U	0.28 U	-	28 U	-	-	-	27 U	27 U	0.034 J	27 U	-	-
Atrazine	mg/kg	0.044 U	0.042 U	0.042 U	0.042 U	0.045 U	0.042 U	-	4.3 U	-	-	-	4.1 U	4.2 U	0.044 U	4.1 U	-	-
Benzaldehyde	mg/kg	0.29 U	0.28 U	0.28 U	0.27 U	0.3 U	0.28 U	-	28 U	-	-	-	27 U	27 U	0.29 U	27 U	-	-
Benzo(a)anthracene	mg/kg	0.0038 J	0.28 U	0.28 U	0.27 U	0.3 U	0.28 U	-	28 U	-	-	-	27 U	27 U	0.079 J	27 U	-	-
Benzo(a)pyrene	mg/kg	0.29 U	0.28 U	0.0077 J	0.27 U	0.3 U	0.28 U	-	28 U	-	-	-	27 U	27 U	0.089 J	27 U	-	-
Benzo(b)fluoranthene	mg/kg	0.0077 J	0.28 U	0.0086 J	0.27 U	0.3 U	0.28 U	-	28 U	-	-	-	27 U	27 U	0.13 J	27 U	-	-
Benzo(g,h,i)perylene	mg/kg	0.29 U	0.28 U	0.0073 J	0.27 U	0.3 U	0.28 U	-	28 U	-	-	-	27 U	27 U	0.061 J	27 U	-	-
Benzo(k)fluoranthene	mg/kg	0.29 U	0.28 U	0.28 U	0.27 U	0.3 U	0.28 U	-	28 U	-	-	-	27 U	27 U	0.056 J	27 U	-	-
Biphenyl (1,1-Biphenyl)	mg/kg	0.29 U	0.28 U	0.28 U	0.27 U	0.3 U	0.28 U	-	28 U	-	-	-	27 U	27 U	0.29 U	27 U	-	-
bis(2-Chloroethoxy)methane	mg/kg	0.29 U	0.28 U	0.28 U	0.27 U	0.3 U	0.28 U	-	28 U	-	-	-	27 U	27 U	0.29 U	27 U	-	-
bis(2-Chloroethyl)ether	mg/kg	0.087 U	0.084 U	0.083 U	0.083 U	0.091 U	0.084 U	-	8.6 U	-	-	-	8.3 U	8.3 U	0.087 U	8.2 U	-	-
bis(2-Ethylhexyl)phthalate (DEHP)	mg/kg	0.025 J	0.022 J	0.044 J	0.43	0.056 J	0.28 U	-	28 U	-	-	-	27 U	27 U	0.045 J	27 U	-	-

TABLE 3.8

PART 201 CRITERIA EXCEEDANCES - SOIL
2013 RFI REPORT
FORMER GENERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation		*WEST02*	*WEST02*	*WEST02*	*WEST02*	*WEST03*	*WEST03*	*WEST03*	*WEST03*	*WEST03*	*WEST03*	*WEST03*	*WEST03*	*WEST03*	*WEST03*	*WEST03*	*WEST03*	*WEST03*
Perimeter Status (1)		*Y*	*Y*	*Y*	*Y*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*
Sample Location		*CRA-726M*	*CRA-726M*	*CRA-726SB*	*CRA-726SB*	*CRA-724I*	*CRA-724I*	*CRA-730SB*	*CRA-730SB*	*CRA-730SB*	*CRA-730SB*	*CRA-739SB*	*CRA-739SB*	*CRA-787I*	*CRA-787I*	*CRA-809SB*	*CRA-809SB*	*CRA-839SB*	*CRA-839SB*
Sample Identification (SO-17358-)		*032012-CB-211*	*032012-CB-212*	*032012-CB-209*	*032012-CB-210*	*031212-DR-064*	*031212-DR-065*	*030112-DR-050*	*030112-DR-051*	*030112-DR-052*	*030812-CB-161*	*030812-CB-162*	*030212-DR-053*	*030212-DR-054*	*032312-CB-247*	*032312-CB-248*	*032113-DR-019*	*032113-DR-020*
Sample Date		*3/20/2012*	*3/20/2012*	*3/20/2012*	*3/20/2012*	*3/12/2012*	*3/12/2012*	*3/1/2012*	*3/1/2012*	*3/1/2012*	*3/8/2012*	*3/8/2012*	*3/2/2012*	*3/2/2012*	*3/23/2012*	*3/23/2012*	*3/21/2013*	*3/21/2013*
Sample Depth		*(0-2) ft BGS*	*(8-10) ft BGS*	*(0-2) ft BGS*	*(6.5-8.5) ft BGS*	*(0-2) ft BGS*	*(6-8) ft BGS*	*(1-3) ft BGS*	*(4-6) ft BGS*	*(7-9) ft BGS*	*(2.75-4.75) ft BGS*	*(7-9) ft BGS*	*(2-4) ft BGS*	*(6-8) ft BGS*	*(1.25-3.25) ft BGS*	*(7.5-9.5) ft BGS*	*(0-2) ft BGS*	*(2-4) ft BGS*
Sample Type																		
	Units																	
SVOCs Continued																		
Butyl benzylphthalate (BBP)	mg/kg	0.29 U	0.28 U	0.28 U	0.27 U	0.3 U	0.28 U	-	28 U	-	-	-	27 U	27 U	0.29 U	27 U	-	-
Caprolactam	mg/kg	0.29 U	0.28 U	0.28 U	0.27 U	0.3 U	0.28 U	-	28 U	-	-	-	27 U	27 U	0.29 U	27 U	-	-
Carbazole	mg/kg	0.29 U	0.28 U	0.28 U	0.27 U	0.3 U	0.28 U	-	28 U	-	-	-	27 U	27 U	0.29 U	27 U	-	-
Chrysene	mg/kg	0.0093 J	0.28 U	0.28 U	0.27 U	0.3 U	0.28 U	-	28 U	-	-	-	27 U	27 U	0.086 J	27 U	-	-
Dibenz(a,h)anthracene	mg/kg	0.29 U	0.28 U	0.28 U	0.27 U	0.3 U	0.28 U	-	28 U	-	-	-	27 U	27 U	0.29 U	27 U	-	-
Dibenzofuran	mg/kg	0.29 U	0.28 U	0.28 U	0.27 U	0.3 U	0.28 U	-	28 U	-	-	-	27 U	27 U	0.011 J	27 U	-	-
Diethyl phthalate	mg/kg	0.29 U	0.28 U	0.28 U	0.27 U	0.3 U	0.28 U	-	28 U	-	-	-	27 U	27 U	0.29 U	27 U	-	-
Dimethyl phthalate	mg/kg	0.29 U	0.28 U	0.28 U	0.27 U	0.3 U	0.28 U	-	28 U	-	-	-	27 U	27 U	0.29 U	27 U	-	-
Di-n-butylphthalate (DBP)	mg/kg	0.29 U	0.28 U	0.28 U	0.27 U	0.3 U	0.28 U	-	28 U	-	-	-	27 U	27 U	0.29 U	27 U	-	-
Di-n-octyl phthalate (DnOP)	mg/kg	0.29 U	0.28 U	0.28 U	0.27 U	0.3 U	0.28 U	-	28 U	-	-	-	27 U	27 U	0.29 U	27 U	-	-
Fluoranthene	mg/kg	0.0089 J	0.28 U	0.01 J	0.27 U	0.3 U	0.28 U	-	28 U	-	-	-	27 U	27 U	0.15 J	27 U	-	-
Fluorene	mg/kg	0.29 U	0.28 U	0.28 U	0.27 U	0.3 U	0.28 U	-	28 U	-	-	-	27 U	27 U	0.0097 J	27 U	-	-
Hexachlorobenzene	mg/kg	0.29 U	0.28 U	0.28 U	0.27 U	0.3 U	0.28 U	-	28 U	-	-	-	27 U	27 U	0.29 U	27 U	-	-
Hexachlorobutadiene	mg/kg	0.044 U	0.042 U	0.042 U	0.042 U	0.045 U	0.042 U	-	4.3 U	-	-	-	4.1 U	4.2 U	0.044 U	4.1 U	-	-
Hexachlorocyclopentadiene	mg/kg	0.29 U	0.28 U	0.28 U	0.27 U	0.3 U	0.28 U	-	28 U	-	-	-	27 U	27 U	0.29 U	27 U	-	-
Hexachloroethane	mg/kg	0.29 U	0.28 U	0.28 U	0.27 U	0.3 U	0.28 U	-	28 U	-	-	-	27 U	27 U	0.29 U	27 U	-	-
Indeno(1,2,3-cd)pyrene	mg/kg	0.29 U	0.28 U	0.28 U	0.27 U	0.3 U	0.28 U	-	28 U	-	-	-	27 U	27 U	0.056 J	27 U	-	-
Isophorone	mg/kg	0.29 U	0.28 U	0.28 U	0.27 U	0.3 U	0.28 U	-	28 U	-	-	-	27 U	27 U	0.29 U	27 U	-	-
Naphthalene	mg/kg	0.29 U	0.28 U	0.28 U	0.27 U	0.3 U	0.28 U	-	28 U	-	-	-	27 U	27 U	0.02 J	27 U	-	-
Nitrobenzene	mg/kg	0.29 U	0.28 U	0.28 U	0.27 U	0.3 U	0.28 U	-	28 U	-	-	-	27 U	27 U	0.29 U	27 U	-	-
N-Nitrosodi-n-propylamine	mg/kg	0.29 U	0.28 U	0.28 U	0.27 U	0.3 U	0.28 U	-	28 U	-	-	-	27 U	27 U	0.29 U	27 U	-	-
N-Nitrosodiphenylamine	mg/kg	0.29 U	0.28 U	0.28 U	0.27 U	0.3 U	0.28 U	-	28 U	-	-	-	27 U	27 U	0.29 U	27 U	-	-
Pentachlorophenol	mg/kg	0.16 U	0.16 U	0.16 U	0.16 U	0.17 U	0.16 U	-	16 U	-	-	-	16 U	16 U	0.16 U	15 U	-	-
Phenanthrene	mg/kg	0.29 U	0.28 U	0.28 U	0.27 U	0.3 U	0.28 U	-	28 U	-	-	-	27 U	27 U	0.12 J	1.1 J	-	-
Phenol	mg/kg	0.29 U	0.28 U	0.28 U	0.27 U	0.3 U	0.28 U	-	28 U	-	-	-	27 U	27 U	0.29 U	27 U	-	-
Pyrene	mg/kg	0.0066 J	0.28 U	0.01 J	0.27 U	0.3 U	0.28 U	-	0.59 J	-	-	-	27 U	27 U	0.13 J	27 U	-	-
Metals																		
Aluminum	mg/kg	4100	1700	3600	1800	5300	1700	-	5900	-	-	-	1900	2000	4100	1900	-	-
Antimony	mg/kg	0.062 J	0.04 J	0.066 J	0.053 J	0.079 J	0.049 J	-	0.053 J	-	-	-	0.078 J	0.086 J	0.053 J	0.047 J	-	-
Arsenic	mg/kg	3.4	2.1	4.2	3.3	3.4	2.8	-	3.3	-	-	-	1.8	**6.8**[cd]	3.2	2.8	-	-
Barium	mg/kg	21	6.2	16	9	37	6	-	68	-	-	-	6.5	12	23	8.1	-	-
Beryllium	mg/kg	0.16 U	0.16 U	0.15 U	0.14 U	0.1 J	0.16 U	-	0.76	-	-	-	0.099 J	0.13	0.19	0.098 J	-	-
Cadmium	mg/kg	0.16	0.11	0.15	0.12	0.082 J	0.036 J	-	0.078 U	-	-	-	0.18	0.22	0.099	0.073	-	-
Calcium	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chromium	mg/kg	7.1	4.2	6.2	4.3	9.7	4	19	28	10	10	5.4	5.4	6.5	7.2	5.5	-	-
Chromium III (trivalent)	mg/kg	6.6	4.2	6.2	4.3	9.7	4	19	-	10	10	5.4	5.4	6.5	-	-	-	-
Chromium VI (hexavalent)	mg/kg	0.43 J	0.84 U	0.84 U	0.83 U	0.91 U	0.84 U	0.86 UJ	-	0.86 UJ	0.87 U	0.83 U	0.83 UJ	0.83 UJ	-	-	-	-
Cobalt	mg/kg	3.5	2	4.2	2.4	2.7	1.8	-	2.9	-	-	-	2.4	3.1	3.3	2.3	-	-
Copper	mg/kg	6.7	4.6	11	6.7	8.3	9.6	-	8	-	-	-	24 J	12 J	9.6	7.9	-	-
Iron	mg/kg	8400	5000	9700	6000	8800	5500	-	8300	-	-	-	4700	9100	7500	5300	-	-
Lead	mg/kg	6.9	2.5	4.5	3.2	5.9	3.7	-	13	-	-	-	6.2	4.8	5.5	2.9	-	-
Lead - coarse fraction	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lead - fine fraction	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lead - total (calculated by fine/coarse fraction)	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Magnesium	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

TABLE 3.8

PART 201 CRITERIA EXCEEDANCES - SOIL
2013 RFI REPORT
FORMER GENERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation		*WEST02*	*WEST02*	*WEST02*	*WEST02*	*WEST03*	*WEST03*	*WEST03*	*WEST03*	*WEST03*	*WEST03*	*WEST03*	*WEST03*	*WEST03*	*WEST03*	*WEST03*	*WEST03*
Perimeter Status (1)		*Y*	*Y*	*Y*	*Y*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*
Sample Location		*CRA-726M*	*CRA-726M*	*CRA-726SB*	*CRA-726SB*	*CRA-724I*	*CRA-724I*	*CRA-730SB*	*CRA-730SB*	*CRA-730SB*	*CRA-739SB*	*CRA-739SB*	*CRA-787I*	*CRA-787I*	*CRA-809SB*	*CRA-809SB*	*CRA-839SB*	*CRA-839SB*
Sample Identification (SO-17358-)		*032012-CB-211*	*032012-CB-212*	*032012-CB-209*	*032012-CB-210*	*031212-DR-064*	*031212-DR-065*	*030112-DR-050*	*030112-DR-051*	*030112-DR-052*	*030812-CB-161*	*030812-CB-162*	*030212-DR-053*	*030212-DR-054*	*032312-CB-247*	*032312-CB-248*	*032113-DR-019*	*032113-DR-020*
Sample Date		*3/20/2012*	*3/20/2012*	*3/20/2012*	*3/20/2012*	*3/12/2012*	*3/12/2012*	*3/1/2012*	*3/1/2012*	*3/1/2012*	*3/8/2012*	*3/8/2012*	*3/2/2012*	*3/2/2012*	*3/23/2012*	*3/23/2012*	*3/21/2013*	*3/21/2013*
Sample Depth		*(0-2) ft BGS*	*(8-10) ft BGS*	*(0-2) ft BGS*	*(6.5-8.5) ft BGS*	*(0-2) ft BGS*	*(6-8) ft BGS*	*(1-3) ft BGS*	*(4-6) ft BGS*	*(7-9) ft BGS*	*(2.75-4.75) ft BGS*	*(7-9) ft BGS*	*(2-4) ft BGS*	*(6-8) ft BGS*	*(1.25-3.25) ft BGS*	*(7.5-9.5) ft BGS*	*(0-2) ft BGS*	*(2-4) ft BGS*
Sample Type																		
	Units																	
Metals Continued																		
Manganese	mg/kg	200	150	240	200	170	110	-	**970 J[cd]**	-	-	-	130	250	250	200	**670[cd]**	**2900[cdo]**
Mercury	mg/kg	0.052	0.037 U	0.041 U	0.044 U	0.066	0.04 U	-	0.045	-	-	-	0.038 U	0.043 U	0.044 U	0.038 U	-	-
Nickel	mg/kg	7.8	5.4	9.6	6.5	7.2	6.2	-	7.4	-	-	-	6.1	9.4	8.7	5.9	-	-
Potassium	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Selenium	mg/kg	0.21 J	0.1 J	0.2 J	0.13 J	0.37	0.19	-	**0.91[d]**	-	-	-	0.15 J	0.31	0.36	0.21	-	-
Silver	mg/kg	0.078 U	0.078 U	0.076 U	0.072 U	0.021 J	0.078 U	-	0.033 J	-	-	-	0.078	0.058 U	0.082 U	0.07 U	-	-
Sodium	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Thallium	mg/kg	0.096 U	0.078 U	0.11 U	0.092 U	0.09 U	0.098 U	-	0.1	-	-	-	0.14	0.15	0.11	0.078	-	-
Vanadium	mg/kg	12	5.7	12	6.6	13	6.4	-	12	-	-	-	5.6	8.2	11	6.9	-	-
Zinc	mg/kg	19	14	22	16	24	18	-	18	-	-	-	38	22	23	15	-	-
Polychlorinated biphenyls (PCBs)																		
Aroclor-1016 (PCB-1016)	mg/kg	0.036 U	0.035 U	0.034 U	0.034 U	0.037 U	0.035 U	-	0.036 U	-	-	-	0.034 U	0.034 U	0.036 U	0.17 U	-	-
Aroclor-1221 (PCB-1221)	mg/kg	0.036 U	0.035 U	0.034 U	0.034 U	0.037 U	0.035 U	-	0.036 U	-	-	-	0.034 U	0.034 U	0.036 U	0.17 U	-	-
Aroclor-1232 (PCB-1232)	mg/kg	0.036 U	0.035 U	0.034 U	0.034 U	0.037 U	0.035 U	-	0.036 U	-	-	-	0.034 U	0.034 U	0.036 U	0.17 U	-	-
Aroclor-1242 (PCB-1242)	mg/kg	0.036 U	0.035 U	0.034 U	0.034 U	0.037 U	0.035 U	-	0.036 U	-	-	-	0.034 U	0.034 U	0.036 U	0.17 U	-	-
Aroclor-1248 (PCB-1248)	mg/kg	0.036 U	0.035 U	0.034 U	0.034 U	0.037 U	0.035 U	-	0.026 J	-	-	-	0.034 U	0.034 U	0.036 U	0.17 U	-	-
Aroclor-1254 (PCB-1254)	mg/kg	0.036 U	0.035 U	0.034 U	0.034 U	0.037 U	0.035 U	-	0.036 U	-	-	-	0.034 U	0.034 U	0.036 U	0.17 U	-	-
Aroclor-1260 (PCB-1260)	mg/kg	0.036 U	0.035 U	0.034 U	0.034 U	0.037 U	0.035 U	-	0.036 U	-	-	-	0.034 U	0.034 U	0.036 U	0.17 U	-	-
Aroclor-1262 (PCB-1262)	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Aroclor-1268 (PCB-1268)	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total PCBs	mg/kg	ND	ND	ND	ND	ND	ND	-	0.026 J	-	-	-	ND	ND	ND	ND	-	-

Notes

Michigan Part 201 generic clean up criteria (updated September 28, 2012)

ID - Insufficient data to develop criterion

NLV - Hazardous substance is not likely to volatilize under most conditions

NA - Criterion or value is not available

Perimeter Status (1) - N - non-perimeter, Y - perimeter

mg/kg - milligram/kilogram

Notes:

U - Not detected at the associated reporting limit.

J - Estimated concentration.

UJ - Not detected; associated reporting limit is estimated.

R - Rejected

TABLE 3.8

PART 201 CRITERIA EXCEEDANCES - SOIL
2013 RFI REPORT
FORMER GENERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation		*WEST03*	*WEST03*	*WEST03*	*WEST03*	*WEST03*	*WEST03*	*WEST04*	*WEST04*	*WEST04*	*WEST04*	*WEST04*	*WEST04*	*WEST04*	*WEST04*	*WEST04*	*WEST04*
Perimeter Status (1)		*N*	*N*	*N*	*N*	*Y*	*Y*	*N*	*N*	*N*	*N*	*N*	*N*	*Y*	*Y*	*Y*	*Y*
Sample Location		*CRA-839SB*	*CRA-841SB*	*CRA-841SB*	*CRA-841SB*	*CRA-725I*	*CRA-725I*	*CRA-729I*	*CRA-729I*	*CRA-740I*	*CRA-740I*	*CRA-741I*	*CRA-741I*	*CRA-728SB*	*CRA-728SB*	*CRA-742D*	*CRA-742D*	*CRA-840SB*
Sample Identification (SO-17358-)		*032113-DR-021*	*032113-DR-016*	*032113-DR-017*	*032113-DR-018*	*031212-DR-062*	*031212-DR-063*	*030712-DR-055*	*030712-DR-056*	*030712-DR-057*	*030712-DR-058*	*030812-DR-059*	*030812-DR-060*	*031912-CB-203*	*031912-CB-204*	*032112-DR-080*	*032112-DR-081*	*032113-DR-013*
Sample Date		*3/21/2013*	*3/21/2013*	*3/21/2013*	*3/21/2013*	*3/12/2012*	*3/12/2012*	*3/7/2012*	*3/7/2012*	*3/7/2012*	*3/7/2012*	*3/8/2012*	*3/8/2012*	*3/19/2012*	*3/19/2012*	*3/21/2012*	*3/21/2012*	*3/21/2013*
Sample Depth		*(4-6) ft BGS*	*(0-2) ft BGS*	*(2-4) ft BGS*	*(4-6) ft BGS*	*(0-2) ft BGS*	*(6-8) ft BGS*	*(1-3) ft BGS*	*(6-8) ft BGS*	*(1-3) ft BGS*	*(7-9) ft BGS*	*(0-2) ft BGS*	*(6-8) ft BGS*	*(0-2) ft BGS*	*(7-9) ft BGS*	*(0-2) ft BGS*	*(3-5) ft BGS*	*(0-2) ft BGS*
Sample Type																		
	Units																	
Volatile Organic Compounds (VOCs)																		
1,1,1-Trichloroethane	mg/kg	-	-	-	-	0.042 U	0.047 U	0.042 U	0.044 U	0.042 U	0.046 U	0.042 U	0.043 U	0.043 U	0.044 U	0.041 U	0.051 U	-
1,1,2,2-Tetrachloroethane	mg/kg	-	-	-	-	0.042 U	0.047 U	0.042 U	0.044 U	0.042 U	0.046 U	0.042 U	0.043 U	0.043 U	0.044 U	0.041 U	0.051 U	-
1,1,2-Trichloroethane	mg/kg	-	-	-	-	0.042 U	0.047 U	0.042 U	0.044 U	0.042 U	0.046 U	0.042 U	0.043 U	0.043 U	0.044 U	0.041 U	0.051 U	-
1,1-Dichloroethane	mg/kg	-	-	-	-	0.042 U	0.047 U	0.042 U	0.044 U	0.042 U	0.046 U	0.042 U	0.043 U	0.043 U	0.044 U	0.041 U	0.051 U	-
1,1-Dichloroethene	mg/kg	-	-	-	-	0.042 U	0.047 U	0.042 U	0.044 U	0.042 U	0.046 U	0.042 U	0.043 U	0.043 U	0.044 U	0.041 U	0.051 U	-
1,2,4-Trichlorobenzene	mg/kg	-	-	-	-	0.21 U	0.24 U	0.21 U	0.22 U	0.21 U	0.23 U	0.21 U	0.22 U	0.031 J	0.22 U	0.2 U	0.25 U	-
1,2-Dibromo-3-chloropropane (DBCP)	mg/kg	-	-	-	-	0.21 U	0.24 U	0.21 U	0.22 U	0.21 U	0.23 U	0.21 U	0.22 U	0.22 U	0.22 U	0.2 U	0.25 U	-
1,2-Dibromoethane (Ethylene dibromide)	mg/kg	-	-	-	-	0.21 U	0.24 U	0.21 U	0.22 U	0.21 U	0.23 U	0.21 U	0.22 U	0.22 U	0.22 U	0.2 U	0.25 U	-
1,2-Dichlorobenzene	mg/kg	-	-	-	-	0.085 U	0.094 U	0.084 U	0.087 U	0.083 U	0.093 U	0.085 U	0.087 U	0.087 U	0.089 U	0.082 U	0.1 U	-
1,2-Dichloroethane	mg/kg	-	-	-	-	0.042 U	0.047 U	0.042 U	0.044 U	0.042 U	0.046 U	0.042 U	0.043 U	0.043 U	0.044 U	0.041 U	0.051 U	-
1,2-Dichloropropane	mg/kg	-	-	-	-	0.042 U	0.047 U	0.042 U	0.044 U	0.042 U	0.046 U	0.042 U	0.043 U	0.043 U	0.044 U	0.041 U	0.051 U	-
1,3-Dichlorobenzene	mg/kg	-	-	-	-	0.085 U	0.094 U	0.084 U	0.087 U	0.083 U	0.093 U	0.085 U	0.087 U	0.087 U	0.089 U	0.082 U	0.1 U	-
1,4-Dichlorobenzene	mg/kg	-	-	-	-	0.085 U	0.094 U	0.084 U	0.087 U	0.083 U	0.093 U	0.085 U	0.087 U	0.087 U	0.089 U	0.082 U	0.1 U	-
2-Butanone (Methyl ethyl ketone) (MEK)	mg/kg	-	-	-	-	0.64 U	0.71 U	0.63 U	0.65 U	0.62 U	0.7 U	0.64 U	0.65 U	0.65 U	0.67 U	0.61 U	0.76 U	-
2-Hexanone	mg/kg	-	-	-	-	2.1 U	2.4 U	2.1 U	2.2 U	2.1 U	2.3 U	2.1 U	2.2 U	2.2 U	2.2 U	2 U	2.5 U	-
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	mg/kg	-	-	-	-	2.1 U	2.4 U	2.1 U	2.2 U	2.1 U	2.3 U	2.1 U	2.2 U	2.2 U	2.2 U	2 U	2.5 U	-
Acetone	mg/kg	-	-	-	-	0.64 U	0.71 U	0.63 U	0.65 U	0.2 J	0.7 U	0.64 U	0.65 U	0.65 U	0.67 U	0.61 U	0.76 U	-
Benzene	mg/kg	-	-	-	-	0.042 U	0.047 U	0.042 U	0.044 U	0.042 U	0.046 U	0.042 U	0.043 U	0.043 U	0.044 U	0.041 U	0.051 U	-
Bromodichloromethane	mg/kg	-	-	-	-	0.085 U	0.094 U	0.084 U	0.087 U	0.083 U	0.093 U	0.085 U	0.087 U	0.087 U	0.089 U	0.082 U	0.1 U	-
Bromoform	mg/kg	-	-	-	-	0.085 U	0.094 U	0.084 U	0.087 U	0.083 U	0.093 U	0.085 U	0.087 U	0.087 U	0.089 U	0.082 U	0.1 U	-
Bromomethane (Methyl bromide)	mg/kg	-	-	-	-	0.21 U	0.24 U	0.21 U	0.22 U	0.21 U	0.23 U	0.21 U	0.22 U	0.22 U	0.22 U	0.2 U	0.25 U	-
Carbon disulfide	mg/kg	-	-	-	-	0.21 U	0.24 U	0.21 U	0.22 U	0.21 U	0.23 U	0.21 U	0.22 U	0.22 U	0.22 U	0.018 J	0.25 U	-
Carbon tetrachloride	mg/kg	-	-	-	-	0.042 U	0.047 U	0.042 U	0.044 U	0.042 U	0.046 U	0.042 U	0.043 U	0.043 U	0.044 U	0.041 U	0.051 U	-
Chlorobenzene	mg/kg	-	-	-	-	0.042 U	0.047 U	0.042 U	0.044 U	0.042 U	0.046 U	0.042 U	0.043 U	0.043 U	0.044 U	0.041 U	0.051 U	-
Chloroethane	mg/kg	-	-	-	-	0.21 U	0.24 U	0.21 U	0.22 U	0.21 U	0.23 U	0.21 U	0.22 U	0.22 U	0.22 U	0.2 U	0.25 U	-
Chloroform (Trichloromethane)	mg/kg	-	-	-	-	0.042 U	0.047 U	0.042 U	0.044 U	0.042 U	0.046 U	0.042 U	0.043 U	0.043 U	0.044 U	0.041 U	0.051 U	-
Chloromethane (Methyl chloride)	mg/kg	-	-	-	-	0.21 U	0.24 U	0.21 U	0.22 U	0.21 U	0.23 U	0.21 U	0.22 U	0.22 U	0.22 U	0.2 U	0.25 U	-
cis-1,2-Dichloroethene	mg/kg	-	-	-	-	0.042 U	0.047 U	0.042 U	0.044 U	0.042 U	0.046 U	0.042 U	0.043 U	0.043 U	0.044 U	0.041 U	0.051 U	-
cis-1,3-Dichloropropene	mg/kg	-	-	-	-	0.042 U	0.047 U	0.042 U	0.044 U	0.042 U	0.046 U	0.042 U	0.043 U	0.043 U	0.044 U	0.041 U	0.051 U	-
Cyclohexane	mg/kg	-	-	-	-	1 U	1.1 U	1 U	1 U	1 U	1.1 U	1 U	1 U	1 U	1.1 U	0.98 U	1.2 U	-
Dibromochloromethane	mg/kg	-	-	-	-	0.042 U	0.047 U	0.042 U	0.044 U	0.042 U	0.046 U	0.042 U	0.043 U	0.043 U	0.044 U	0.041 U	0.051 U	-
Dichlorodifluoromethane (CFC-12)	mg/kg	-	-	-	-	0.085 U	0.094 U	0.084 U	0.087 U	0.083 U	0.093 U	0.085 U	0.087 U	0.087 U	0.089 U	0.082 U	0.1 U	-
Ethylbenzene	mg/kg	-	-	-	-	0.042 U	0.047 U	0.042 U	0.044 U	0.042 U	0.046 U	0.042 U	0.043 U	0.043 U	0.044 U	0.041 U	0.051 U	-
Isopropyl benzene	mg/kg	-	-	-	-	0.21 U	0.24 U	0.21 U	0.22 U	0.21 U	0.23 U	0.21 U	0.22 U	0.22 U	0.22 U	0.2 U	0.25 U	-
Methyl acetate	mg/kg	-	-	-	-	1 U	1.1 U	0.066 J	1 U	1 U	1.1 U	1 U	1 U	1 U	1.1 U	0.33 J	1.2 U	-
Methyl cyclohexane	mg/kg	-	-	-	-	1 U	1.1 U	1 U	1 U	1 U	1.1 U	1 U	1 U	1 U	1.1 U	0.98 U	1.2 U	-
Methyl tert butyl ether (MTBE)	mg/kg	-	-	-	-	0.21 U	0.24 U	0.21 U	0.22 U	0.21 U	0.23 U	0.21 U	0.22 U	0.22 U	0.22 U	0.2 U	0.25 U	-
Methylene chloride	mg/kg	-	-	-	-	0.21 U	0.24 U	0.21 U	0.22 U	0.21 U	0.23 U	0.21 U	0.22 U	0.22 U	0.22 U	0.2 U	0.25 U	-
Styrene	mg/kg	-	-	-	-	0.042 U	0.047 U	0.042 U	0.044 U	0.042 U	0.046 U	0.042 U	0.043 U	0.043 U	0.044 U	0.041 U	0.051 U	-
Tetrachloroethene	mg/kg	-	-	-	-	0.042 U	0.047 U	0.042 U	0.044 U	0.042 U	0.046 U	0.042 U	0.043 U	0.043 U	0.044 U	0.012 J	0.051 U	-
Toluene	mg/kg	-	-	-	-	0.085 U	0.094 U	0.084 U	0.087 U	0.083 U	0.093 U	0.085 U	0.087 U	0.087 U	0.089 U	0.082 U	0.1 U	-
trans-1,2-Dichloroethene	mg/kg	-	-	-	-	0.042 U	0.047 U	0.042 U	0.044 U	0.042 U	0.046 U	0.042 U	0.043 U	0.043 U	0.044 U	0.041 U	0.051 U	-
trans-1,3-Dichloropropene	mg/kg	-	-	-	-	0.042 U	0.047 U	0.042 U	0.044 U	0.042 U	0.046 U	0.042 U	0.043 U	0.043 U	0.044 U	0.041 U	0.051 U	-
Trichloroethene	mg/kg	-	-	-	-	0.042 U	0.047 U	0.042 U	0.011 J	0.042 U	0.046 U	0.042 U	0.043 U	0.043 U	0.044 U	0.041 U	0.051 U	-

TABLE 3.8

PART 201 CRITERIA EXCEEDANCES - SOIL
2013 RFI REPORT
FORMER GENERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation		*WEST03*	*WEST03*	*WEST03*	*WEST03*	*WEST03*	*WEST03*	*WEST04*	*WEST04*	*WEST04*	*WEST04*	*WEST04*	*WEST04*	*WEST04*	*WEST04*	*WEST04*	*WEST04*
Perimeter Status (1)		*N*	*N*	*N*	*N*	*Y*	*Y*	*N*	*N*	*N*	*N*	*N*	*N*	*Y*	*Y*	*Y*	*Y*
Sample Location		*CRA-839SB*	*CRA-841SB*	*CRA-841SB*	*CRA-841SB*	*CRA-725I*	*CRA-725I*	*CRA-729I*	*CRA-729I*	*CRA-740I*	*CRA-740I*	*CRA-741I*	*CRA-741I*	*CRA-728SB*	*CRA-728SB*	*CRA-742D*	*CRA-742D*	*CRA-840SB*
Sample Identification (SO-17358-)		*032113-DR-021*	*032113-DR-016*	*032113-DR-017*	*032113-DR-018*	*031212-DR-062*	*031212-DR-063*	*030712-DR-055*	*030712-DR-056*	*030712-DR-057*	*030712-DR-058*	*030812-DR-059*	*030812-DR-060*	*031912-CB-203*	*031912-CB-204*	*032112-DR-080*	*032112-DR-081*	*032113-DR-013*
Sample Date		*3/21/2013*	*3/21/2013*	*3/21/2013*	*3/21/2013*	*3/12/2012*	*3/12/2012*	*3/7/2012*	*3/7/2012*	*3/7/2012*	*3/7/2012*	*3/8/2012*	*3/8/2012*	*3/19/2012*	*3/19/2012*	*3/21/2012*	*3/21/2012*	*3/21/2013*
Sample Depth		*(4-6) ft BGS*	*(0-2) ft BGS*	*(2-4) ft BGS*	*(4-6) ft BGS*	*(0-2) ft BGS*	*(6-8) ft BGS*	*(1-3) ft BGS*	*(6-8) ft BGS*	*(1-3) ft BGS*	*(7-9) ft BGS*	*(0-2) ft BGS*	*(6-8) ft BGS*	*(0-2) ft BGS*	*(7-9) ft BGS*	*(0-2) ft BGS*	*(3-5) ft BGS*	*(0-2) ft BGS*
Sample Type																		
	Units																	
VOCs Continued																		
Trichlorofluoromethane (CFC-11)	mg/kg	-	-	-	-	0.085 U	0.094 U	0.084 U	0.087 U	0.083 U	0.093 U	0.085 U	0.087 U	0.087 U	0.089 U	0.082 U	0.1 U	-
Trifluorotrichloroethane (Freon 113)	mg/kg	-	-	-	-	0.21 U	0.24 U	0.21 U	0.22 U	0.21 U	0.23 U	0.21 U	0.22 U	0.22 U	0.22 U	0.2 U	0.25 U	-
Vinyl chloride	mg/kg	-	-	-	-	0.034 U	0.038 U	0.034 U	0.035 U	0.033 U	0.037 U	0.034 U	0.035 U	0.035 U	0.036 U	0.033 U	0.04 U	-
Xylenes (total)	mg/kg	-	-	-	-	0.13 U	0.14 U	0.13 U	0.13 U	0.014 J	0.14 U	0.13 U	0.13 U	0.13 U	0.13 U	0.12 U	0.15 U	-
Semi-Volatile Organic Compounds (SVOCs)																		
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	mg/kg	-	-	-	-	0.29 U	0.28 U	3 U	0.28 U	5.9 U	0.27 U	0.28 U	0.27 U	0.29 U	0.29 U	0.29 U	0.28 U	-
2,4,5-Trichlorophenol	mg/kg	-	-	-	-	0.29 U	0.28 U	3 U	0.28 U	5.9 U	0.27 U	0.28 U	0.27 U	0.29 U	0.29 U	0.29 U	0.28 U	-
2,4,6-Trichlorophenol	mg/kg	-	-	-	-	0.29 U	0.28 U	3 U	0.28 U	5.9 U	0.27 U	0.28 U	0.27 U	0.29 U	0.29 U	0.29 U	0.28 U	-
2,4-Dichlorophenol	mg/kg	-	-	-	-	0.29 U	0.28 U	3 U	0.28 U	5.9 U	0.27 U	0.28 U	0.27 U	0.29 U	0.29 U	0.29 U	0.28 U	-
2,4-Dimethylphenol	mg/kg	-	-	-	-	0.29 U	0.28 U	3 U	0.28 U	5.9 U	0.27 U	0.28 U	0.27 U	0.29 U	0.29 U	0.29 U	0.28 U	-
2,4-Dinitrophenol	mg/kg	-	-	-	-	0.16 U	0.16 U	1.7 U	0.16 U	3.4 U	0.16 U	0.16 U	0.16 U	0.16 U	0.17 U	0.16 U	0.16 U	-
2,4-Dinitrotoluene	mg/kg	-	-	-	-	0.29 U	0.28 U	3 U	0.28 U	5.9 U	0.27 U	0.28 U	0.27 U	0.29 U	0.29 U	0.29 U	0.28 U	-
2,6-Dinitrotoluene	mg/kg	-	-	-	-	0.29 U	0.28 U	3 U	0.28 U	5.9 U	0.27 U	0.28 U	0.27 U	0.29 U	0.29 U	0.29 U	0.28 U	-
2-Chloronaphthalene	mg/kg	-	-	-	-	0.29 U	0.28 U	3 U	0.28 U	5.9 U	0.27 U	0.28 U	0.27 U	0.29 U	0.29 U	0.29 U	0.28 U	-
2-Chlorophenol	mg/kg	-	-	-	-	0.29 U	0.28 U	3 U	0.28 U	5.9 U	0.27 U	0.28 U	0.27 U	0.29 U	0.29 U	0.29 U	0.28 U	-
2-Methylnaphthalene	mg/kg	-	-	-	-	0.29 U	0.28 U	3 U	0.28 U	5.9 U	0.27 U	0.28 U	0.27 U	0.29 U	0.0041 J	0.0068 J	0.28 U	-
2-Methylphenol	mg/kg	-	-	-	-	0.29 U	0.28 U	3 U	0.28 U	5.9 U	0.27 U	0.28 U	0.27 U	0.29 U	0.29 U	0.29 U	0.28 U	-
2-Nitroaniline	mg/kg	-	-	-	-	0.22 U	0.21 U	2.3 U	0.21 U	4.5 U	0.21 U	0.21 U	0.21 U	0.22 U	0.22 U	0.22 U	0.21 U	-
2-Nitrophenol	mg/kg	-	-	-	-	0.29 U	0.28 U	3 U	0.28 U	5.9 U	0.27 U	0.28 U	0.27 U	0.29 U	0.29 U	0.29 U	0.28 U	-
3&4-Methylphenol	mg/kg	-	-	-	-	0.29 U	0.28 U	3 U	0.28 U	5.9 U	0.27 U	0.28 U	0.27 U	0.29 U	0.29 U	0.29 U	0.28 U	-
3,3'-Dichlorobenzidine	mg/kg	-	-	-	-	1.7 U	1.7 U	18 U	1.7 U	36 U	1.7 U	1.7 U	1.7 U	1.7 U	1.8 U	1.8 U	1.7 U	-
3-Nitroaniline	mg/kg	-	-	-	-	0.22 U	0.21 U	2.3 U	0.21 U	4.5 U	0.21 U	0.21 U	0.21 U	0.22 U	0.22 U	0.22 U	0.21 U	-
4,6-Dinitro-2-methylphenol	mg/kg	-	-	-	-	0.16 U	0.16 U	1.7 U	0.16 U	3.4 U	0.16 U	0.16 U	0.16 U	0.16 U	0.17 U	0.16 U	0.16 U	-
4-Bromophenyl phenyl ether	mg/kg	-	-	-	-	0.29 U	0.28 U	3 U	0.28 U	5.9 U	0.27 U	0.28 U	0.27 U	0.29 U	0.29 U	0.29 U	0.28 U	-
4-Chloro-3-methylphenol	mg/kg	-	-	-	-	0.29 U	0.28 U	3 U	0.28 U	5.9 U	0.27 U	0.28 U	0.27 U	0.29 U	0.29 U	0.29 U	0.28 U	-
4-Chloroaniline	mg/kg	-	-	-	-	0.22 U	0.21 U	2.3 U	0.21 U	4.5 U	0.21 U	0.21 U	0.21 U	0.22 U	0.22 U	0.22 U	0.21 U	-
4-Chlorophenyl phenyl ether	mg/kg	-	-	-	-	0.29 U	0.28 U	3 U	0.28 U	5.9 U	0.27 U	0.28 U	0.27 U	0.29 U	0.29 U	0.29 U	0.28 U	-
4-Nitroaniline	mg/kg	-	-	-	-	0.22 U	0.21 U	2.3 U	0.21 U	4.5 U	0.21 U	0.21 U	0.21 U	0.22 U	0.22 U	0.22 U	0.21 U	-
4-Nitrophenol	mg/kg	-	-	-	-	0.36 U	0.35 U	3.7 U	0.35 U	7.4 U	0.34 U	0.35 U	0.34 U	0.36 U	0.37 U	0.36 U	0.35 U	-
Acenaphthene	mg/kg	-	-	-	-	0.29 U	0.28 U	3 U	0.28 U	5.9 U	0.27 U	0.28 U	0.27 U	0.29 U	0.29 U	0.29 U	0.28 U	-
Acenaphthylene	mg/kg	-	-	-	-	0.29 U	0.28 U	3 U	0.28 U	5.9 U	0.27 U	0.28 U	0.27 U	0.29 U	0.29 U	0.005 J	0.28 U	-
Acetophenone	mg/kg	-	-	-	-	0.29 U	0.28 U	3 U	0.28 U	5.9 U	0.27 U	0.28 U	0.27 U	0.29 U	0.29 U	0.29 U	0.28 U	-
Anthracene	mg/kg	-	-	-	-	0.29 U	0.28 U	0.07 J	0.28 U	0.31 J	0.27 U	0.0065 J	0.27 U	0.29 U	0.0042 J	0.29 U	0.28 U	-
Atrazine	mg/kg	-	-	-	-	0.044 U	0.042 U	0.45 U	0.042 U	0.9 U	0.042 U	0.043 U	0.042 U	0.043 U	0.044 U	0.044 U	0.043 U	-
Benzaldehyde	mg/kg	-	-	-	-	0.29 U	0.28 U	3 U	0.28 U	5.9 U	0.27 U	0.28 U	0.27 U	0.29 U	0.29 U	0.29 U	0.28 U	-
Benzo(a)anthracene	mg/kg	-	-	-	-	0.29 U	0.28 U	0.17 J	0.28 U	0.64 J	0.27 U	0.035 J	0.27 U	0.29 U	0.02 J	0.017 J	0.28 U	-
Benzo(a)pyrene	mg/kg	-	-	-	-	0.29 U	0.28 U	0.18 J	0.28 U	0.6 J	0.27 U	0.036 J	0.27 U	0.004 J	0.018 J	0.011 J	0.28 U	-
Benzo(b)fluoranthene	mg/kg	-	-	-	-	0.29 U	0.28 U	0.27 J	0.28 U	0.75 J	0.27 U	0.049 J	0.27 U	0.29 U	0.031 J	0.03 J	0.01 J	-
Benzo(g,h,i)perylene	mg/kg	-	-	-	-	0.29 U	0.28 U	0.18 J	0.28 U	0.41 J	0.27 U	0.031 J	0.27 U	0.29 U	0.019 J	0.011 J	0.28 U	-
Benzo(k)fluoranthene	mg/kg	-	-	-	-	0.29 U	0.28 U	0.13 J	0.28 U	0.39 J	0.27 U	0.02 J	0.27 U	0.29 U	0.0091 J	0.29 U	0.28 U	-
Biphenyl (1,1-Biphenyl)	mg/kg	-	-	-	-	0.29 U	0.28 U	3 U	0.28 U	5.9 U	0.27 U	0.28 U	0.27 U	0.29 U	0.29 U	0.29 U	0.28 U	-
bis(2-Chloroethoxy)methane	mg/kg	-	-	-	-	0.29 U	0.28 U	3 U	0.28 U	5.9 U	0.27 U	0.28 U	0.27 U	0.29 U	0.29 U	0.29 U	0.28 U	-
bis(2-Chloroethyl)ether	mg/kg	-	-	-	-	0.087 U	0.084 U	0.91 U	0.085 U	1.8 U	0.083 U	0.086 U	0.083 U	0.087 U	0.089 U	0.088 U	0.086 U	-
bis(2-Ethylhexyl)phthalate (DEHP)	mg/kg	-	-	-	-	0.029 J	0.021 J	3 U	0.28 U	5.9 U	0.025 J	0.28 U	0.27 U	0.021 J	0.037 J	0.29 U	0.28 U	-

TABLE 3.8

PART 201 CRITERIA EXCEEDANCES - SOIL
2013 RFI REPORT
FORMER GENERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation		*WEST03*	*WEST03*	*WEST03*	*WEST03*	*WEST03*	*WEST03*	*WEST04*	*WEST04*	*WEST04*	*WEST04*	*WEST04*	*WEST04*	*WEST04*	*WEST04*	*WEST04*	*WEST04*
Perimeter Status (1)		*N*	*N*	*N*	*N*	*Y*	*Y*	*N*	*N*	*N*	*N*	*N*	*N*	*Y*	*Y*	*Y*	*Y*
Sample Location		*CRA-839SB*	*CRA-841SB*	*CRA-841SB*	*CRA-841SB*	*CRA-725I*	*CRA-725I*	*CRA-729I*	*CRA-729I*	*CRA-740I*	*CRA-740I*	*CRA-741I*	*CRA-741I*	*CRA-728SB*	*CRA-728SB*	*CRA-742D*	*CRA-742D*	*CRA-840SB*
Sample Identification (SO-17358-)		*032113-DR-021*	*032113-DR-016*	*032113-DR-017*	*032113-DR-018*	*031212-DR-062*	*031212-DR-063*	*030712-DR-055*	*030712-DR-056*	*030712-DR-057*	*030712-DR-058*	*030812-DR-059*	*030812-DR-060*	*031912-CB-203*	*031912-CB-204*	*032112-DR-080*	*032112-DR-081*	*032113-DR-013*
Sample Date		*3/21/2013*	*3/21/2013*	*3/21/2013*	*3/21/2013*	*3/12/2012*	*3/12/2012*	*3/7/2012*	*3/7/2012*	*3/7/2012*	*3/7/2012*	*3/8/2012*	*3/8/2012*	*3/19/2012*	*3/19/2012*	*3/21/2012*	*3/21/2012*	*3/21/2013*
Sample Depth		*(4-6) ft BGS*	*(0-2) ft BGS*	*(2-4) ft BGS*	*(4-6) ft BGS*	*(0-2) ft BGS*	*(6-8) ft BGS*	*(1-3) ft BGS*	*(6-8) ft BGS*	*(1-3) ft BGS*	*(7-9) ft BGS*	*(0-2) ft BGS*	*(6-8) ft BGS*	*(0-2) ft BGS*	*(7-9) ft BGS*	*(0-2) ft BGS*	*(3-5) ft BGS*	*(0-2) ft BGS*
Sample Type																		
	Units																	
SVOCs Continued																		
Butyl benzylphthalate (BBP)	mg/kg	-	-	-	-	0.29 U	0.28 U	3 U	0.28 U	5.9 U	0.27 U	0.28 U	0.27 U	0.29 U	0.014 J	0.29 U	0.28 U	-
Caprolactam	mg/kg	-	-	-	-	0.29 U	0.28 U	3 U	0.28 U	5.9 U	0.27 U	0.28 U	0.27 U	0.29 U	0.29 U	0.29 U	0.28 U	-
Carbazole	mg/kg	-	-	-	-	0.29 U	0.28 U	3 U	0.28 U	5.9 U	0.27 U	0.28 U	0.27 U	0.29 U	0.29 U	0.29 U	0.28 U	-
Chrysene	mg/kg	-	-	-	-	0.29 U	0.28 U	0.24 J	0.28 U	0.86 J	0.27 U	0.039 J	0.27 U	0.29 U	0.031 J	0.011 J	0.28 U	-
Dibenz(a,h)anthracene	mg/kg	-	-	-	-	0.29 U	0.28 U	3 U	0.28 U	5.9 U	0.27 U	0.28 U	0.27 U	0.29 U	0.29 U	0.29 U	0.28 U	-
Dibenzofuran	mg/kg	-	-	-	-	0.29 U	0.28 U	3 U	0.28 U	5.9 U	0.27 U	0.28 U	0.27 U	0.29 U	0.29 U	0.29 U	0.28 U	-
Diethyl phthalate	mg/kg	-	-	-	-	0.29 U	0.28 U	3 U	0.28 U	5.9 U	0.27 U	0.28 U	0.27 U	0.29 U	0.29 U	0.29 U	0.28 U	-
Dimethyl phthalate	mg/kg	-	-	-	-	0.29 U	0.28 U	3 U	0.28 U	5.9 U	0.27 U	0.28 U	0.27 U	0.29 U	0.29 U	0.29 U	0.28 U	-
Di-n-butylphthalate (DBP)	mg/kg	-	-	-	-	0.29 U	0.28 U	3 U	0.28 U	5.9 U	0.27 U	0.28 U	0.27 U	0.29 U	0.29 U	0.29 U	0.28 U	-
Di-n-octyl phthalate (DnOP)	mg/kg	-	-	-	-	0.29 U	0.28 U	3 U	0.28 U	5.9 U	0.27 U	0.28 U	0.27 U	0.29 U	0.29 U	0.29 U	0.28 U	-
Fluoranthene	mg/kg	-	-	-	-	0.29 U	0.28 U	0.31 J	0.28 U	1.5 J	0.0088 J	0.056 J	0.27 U	0.0072 J	0.046 J	0.024 J	0.0037 J	-
Fluorene	mg/kg	-	-	-	-	0.29 U	0.28 U	3 U	0.28 U	5.9 U	0.27 U	0.28 U	0.27 U	0.29 U	0.29 U	0.29 U	0.28 U	-
Hexachlorobenzene	mg/kg	-	-	-	-	0.29 U	0.28 U	3 U	0.28 U	5.9 U	0.27 U	0.28 U	0.27 U	0.29 U	0.29 U	0.29 U	0.28 U	-
Hexachlorobutadiene	mg/kg	-	-	-	-	0.044 U	0.042 U	0.45 U	0.042 U	0.9 U	0.042 U	0.043 U	0.042 U	0.043 U	0.044 U	0.044 U	0.043 U	-
Hexachlorocyclopentadiene	mg/kg	-	-	-	-	0.29 U	0.28 U	3 U	0.28 U	5.9 U	0.27 U	0.28 U	0.27 U	0.29 U	0.29 U	0.29 U	0.28 U	-
Hexachloroethane	mg/kg	-	-	-	-	0.29 U	0.28 U	3 U	0.28 U	5.9 U	0.27 U	0.28 U	0.27 U	0.29 U	0.29 U	0.29 U	0.28 U	-
Indeno(1,2,3-cd)pyrene	mg/kg	-	-	-	-	0.29 U	0.28 U	0.16 J	0.28 U	0.37 J	0.27 U	0.024 J	0.27 U	0.29 U	0.013 J	0.0077 J	0.28 U	-
Isophorone	mg/kg	-	-	-	-	0.29 U	0.28 U	3 U	0.28 U	5.9 U	0.27 U	0.28 U	0.27 U	0.29 U	0.29 U	0.29 U	0.28 U	-
Naphthalene	mg/kg	-	-	-	-	0.29 U	0.28 U	3 U	0.28 U	5.9 U	0.27 U	0.28 U	0.27 U	0.29 U	0.29 U	0.0056 J	0.28 U	-
Nitrobenzene	mg/kg	-	-	-	-	0.29 U	0.28 U	3 U	0.28 U	5.9 U	0.27 U	0.28 U	0.27 U	0.29 U	0.29 U	0.29 U	0.28 U	-
N-Nitrosodi-n-propylamine	mg/kg	-	-	-	-	0.29 U	0.28 U	3 U	0.28 U	5.9 U	0.27 U	0.28 U	0.27 U	0.29 U	0.29 U	0.29 U	0.28 U	-
N-Nitrosodiphenylamine	mg/kg	-	-	-	-	0.29 U	0.28 U	3 U	0.28 U	5.9 U	0.27 U	0.28 U	0.27 U	0.29 U	0.29 U	0.29 U	0.28 U	-
Pentachlorophenol	mg/kg	-	-	-	-	0.16 U	0.16 U	1.7 U	0.16 U	3.4 U	0.16 U	0.16 U	0.16 U	0.16 U	0.17 U	0.16 U	0.16 U	-
Phenanthrene	mg/kg	-	-	-	-	0.29 U	0.28 U	0.13 J	0.28 U	0.9 J	0.27 U	0.02 J	0.27 U	0.29 U	0.022 J	0.014 J	0.28 U	-
Phenol	mg/kg	-	-	-	-	0.29 U	0.28 U	3 U	0.28 U	5.9 U	0.27 U	0.28 U	0.27 U	0.29 U	0.29 U	0.29 U	0.28 U	-
Pyrene	mg/kg	-	-	-	-	0.29 U	0.28 U	0.28 J	0.28 U	1.3 J	0.0074 J	0.047 J	0.27 U	0.0056 J	0.037 J	0.02 J	0.28 U	-
Metals																		
Aluminum	mg/kg	-	-	-	-	4800	1400	5600	3000	4100	1900	4500	3000	3400	3700	4100	3600	-
Antimony	mg/kg	-	-	-	-	0.033 J	0.033 J	0.16 J	0.069 J	0.12 J	0.061 J	0.05 J	0.08 J	0.34	0.094 J	0.041 J	0.14 UJ	-
Arsenic	mg/kg	-	-	-	-	2.1	2.3	3.9	4.3	3.4	2.8	3.2	**6.6**[cd]	**8.8**[bcdp]	4.1	5	2	-
Barium	mg/kg	-	-	-	-	27	5.2	74	6.9	44	5.6	42	10	18	18	27	21	-
Beryllium	mg/kg	-	-	-	-	0.16 U	0.16 U	0.29	0.16 U	0.19	0.15 U	0.046 J	0.074 J	0.16 U	0.17 U	0.25	0.16	-
Cadmium	mg/kg	-	-	-	-	0.078 U	0.08 U	0.36	0.14	0.25	0.11	0.11	0.13	0.17	0.17	0.17	0.043 J	-
Calcium	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chromium	mg/kg	-	-	-	-	7.5	3.5	160	7.9	11	4.6	7.7	6.3	7.5	7.8	9.5	7.5	-
Chromium III (trivalent)	mg/kg	-	-	-	-	-	-	-	-	-	-	7.2	6.3	7.5	7.8	9.5	7.5	-
Chromium VI (hexavalent)	mg/kg	-	-	-	-	-	-	-	-	-	-	0.52 J	0.021 U	0.87 U	0.89 U	0.88 U	0.86 U	-
Cobalt	mg/kg	-	-	-	-	3.5	1.7	3.8	3.9	2.9	2.7	3.9	3.3	4.5	3.6	2.3	1.9	-
Copper	mg/kg	-	-	-	-	3.3	3.9	21	12	17	4.6	6.6	23	13	10	6.6	3.1	-
Iron	mg/kg	-	-	-	-	7800	4400	**16000**[c]	8300	**13000**[c]	6800	8600	11000	10000	9300	11000	5600	-
Lead	mg/kg	-	-	-	-	4.3	2.2	19	4.4	17	2.6	13	8.1	6.6	17	6.6	3.4	-
Lead - coarse fraction	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lead - fine fraction	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lead - total (calculated by fine/coarse fraction)	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Magnesium	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

TABLE 3.8

PART 201 CRITERIA EXCEEDANCES - SOIL
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FORMER GENERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation		WEST03	WEST03	WEST03	WEST03	WEST03	WEST03	WEST04	WEST04	WEST04	WEST04	WEST04	WEST04	WEST04	WEST04	WEST04	WEST04
Perimeter Status (1)		N	N	N	N	Y	Y	N	N	N	N	N	N	Y	Y	Y	Y
Sample Location		CRA-839SB	CRA-841SB	CRA-841SB	CRA-841SB	CRA-725I	CRA-725I	CRA-729I	CRA-729I	CRA-740I	CRA-740I	CRA-741I	CRA-741I	CRA-728SB	CRA-728SB	CRA-742D	CRA-742D	CRA-840SB
Sample Identification (SO-17358-)		032113-DR-021	032113-DR-016	032113-DR-017	032113-DR-018	031212-DR-062	031212-DR-063	030712-DR-055	030712-DR-056	030712-DR-057	030712-DR-058	030812-DR-059	030812-DR-060	031912-CB-203	031912-CB-204	032112-DR-080	032112-DR-081	032113-DR-013
Sample Date		3/21/2013	3/21/2013	3/21/2013	3/21/2013	3/12/2012	3/12/2012	3/7/2012	3/7/2012	3/7/2012	3/7/2012	3/8/2012	3/8/2012	3/19/2012	3/19/2012	3/21/2012	3/21/2012	3/21/2013
Sample Depth		(4-6) ft BGS	(0-2) ft BGS	(2-4) ft BGS	(4-6) ft BGS	(0-2) ft BGS	(6-8) ft BGS	(1-3) ft BGS	(6-8) ft BGS	(1-3) ft BGS	(7-9) ft BGS	(0-2) ft BGS	(6-8) ft BGS	(0-2) ft BGS	(7-9) ft BGS	(0-2) ft BGS	(3-5) ft BGS	(0-2) ft BGS
Sample Type																		
	Units																	
Metals Continued																		
Manganese	mg/kg	120	170	150	140	**540[bcd]**	110	**2400[cdo]**	220	**630[cd]**	150	380	210	340	230	170 J	87 J	130
Mercury	mg/kg	-	-	-	-	0.018 J	0.039 U	0.041 U	0.036 U	0.052 U	0.038 U	0.024 J	0.042 U	0.045 U	0.027 J	0.02 J	0.042 UJ	-
Nickel	mg/kg	-	-	-	-	6.1	4.6	11	11	9.7	5.6	7.4	12	13	10	6.3	5.5	-
Potassium	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Selenium	mg/kg	-	-	-	-	0.3	0.13 J	**0.45[d]**	0.24	0.36	0.21	0.24 J	0.32 J	0.32 J	0.32 J	**0.44[d]**	0.19	-
Silver	mg/kg	-	-	-	-	0.078 U	0.08 U	0.018 J	0.081 U	0.072 U	0.077 U	0.016 J	0.076 U	0.02 J	0.083 U	0.088 U	0.072 U	-
Sodium	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Thallium	mg/kg	-	-	-	-	0.079 U	0.08 U	0.083 U	0.12	0.41	0.077 U	0.099 U	0.12 U	0.26	0.18 U	0.088 U	0.072 U	-
Vanadium	mg/kg	-	-	-	-	10	5.3	26	8.9	11	8	13	10	11	11	16	9	-
Zinc	mg/kg	-	-	-	-	20	14	31	23	28	16	32	34	29	26	23	13	-
Polychlorinated biphenyls (PCBs)																		
Aroclor-1016 (PCB-1016)	mg/kg	-	-	-	-	0.036 U	0.035 U	0.038 U	0.035 U	0.037 U	0.034 U	0.035 U	0.034 U	0.036 U	0.037 U	0.036 U	0.035 U	-
Aroclor-1221 (PCB-1221)	mg/kg	-	-	-	-	0.036 U	0.035 U	0.038 U	0.035 U	0.037 U	0.034 U	0.035 U	0.034 U	0.036 U	0.037 U	0.036 U	0.035 U	-
Aroclor-1232 (PCB-1232)	mg/kg	-	-	-	-	0.036 U	0.035 U	0.038 U	0.035 U	0.037 U	0.034 U	0.035 U	0.034 U	0.036 U	0.037 U	0.036 U	0.035 U	-
Aroclor-1242 (PCB-1242)	mg/kg	-	-	-	-	0.036 U	0.035 U	0.038 U	0.035 U	0.053	0.034 U	0.035 U	0.034 U	0.036 U	0.037 U	0.036 U	0.035 U	-
Aroclor-1248 (PCB-1248)	mg/kg	-	-	-	-	0.036 U	0.035 U	0.038 U	0.035 U	0.037 U	0.034 U	0.035 U	0.034 U	0.036 U	0.037 U	0.036 U	0.035 U	-
Aroclor-1254 (PCB-1254)	mg/kg	-	-	-	-	0.036 U	0.035 U	0.038 U	0.035 U	0.037 U	0.034 U	0.035 U	0.034 U	0.036 U	0.037 U	0.036 U	0.035 U	-
Aroclor-1260 (PCB-1260)	mg/kg	-	-	-	-	0.036 U	0.035 U	0.063	0.035 U	0.037 U	0.034 U	0.035 U	0.034 U	0.036 U	0.037 U	0.036 U	0.035 U	-
Aroclor-1262 (PCB-1262)	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Aroclor-1268 (PCB-1268)	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total PCBs	mg/kg	-	-	-	-	ND	ND	0.063	ND	0.053	ND	ND	ND	ND	ND	ND	ND	-

Notes

Michigan Part 201 generic clean up criteria (updated September 28, 2012)

ID - Insufficient data to develop criterion

NLV - Hazardous substance is not likely to volatilize under most conditions

NA - Criterion or value is not available

Perimeter Status (1) - N - non-perimeter, Y - perimeter

mg/kg - milligram/kilogram

Notes:

U - Not detected at the associated reporting limit.

J - Estimated concentration.

UJ - Not detected; associated reporting limit is estimated.

R - Rejected

TABLE 3.8

PART 201 CRITERIA EXCEEDANCES - SOIL
2013 RFI REPORT
FORMER GENERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation		*WEST04*	*WEST04*	*WEST04*	*WEST04*	*WEST04*
Perimeter Status (1)		*Y*	*Y*	*Y*	*Y*	*Y*
Sample Location		*CRA-840SB*	*CRA-840SB*	*CRA-842SB*	*CRA-842SB*	*CRA-842SB*
Sample Identification (SO-17358-)		*032113-DR-014*	*032113-DR-015*	*032113-DR-010*	*032113-DR-011*	*032113-DR-012*
Sample Date		*3/21/2013*	*3/21/2013*	*3/21/2013*	*3/21/2013*	*3/21/2013*
Sample Depth		*(2-4) ft BGS*	*(4-6) ft BGS*	*(0-2) ft BGS*	*(2-4) ft BGS*	*(4-6) ft BGS*
Sample Type						
	Units					
Volatile Organic Compounds (VOCs)						
1,1,1-Trichloroethane	mg/kg	-	-	-	-	-
1,1,2,2-Tetrachloroethane	mg/kg	-	-	-	-	-
1,1,2-Trichloroethane	mg/kg	-	-	-	-	-
1,1-Dichloroethane	mg/kg	-	-	-	-	-
1,1-Dichloroethene	mg/kg	-	-	-	-	-
1,2,4-Trichlorobenzene	mg/kg	-	-	-	-	-
1,2-Dibromo-3-chloropropane (DBCP)	mg/kg	-	-	-	-	-
1,2-Dibromoethane (Ethylene dibromide)	mg/kg	-	-	-	-	-
1,2-Dichlorobenzene	mg/kg	-	-	-	-	-
1,2-Dichloroethane	mg/kg	-	-	-	-	-
1,2-Dichloropropane	mg/kg	-	-	-	-	-
1,3-Dichlorobenzene	mg/kg	-	-	-	-	-
1,4-Dichlorobenzene	mg/kg	-	-	-	-	-
2-Butanone (Methyl ethyl ketone) (MEK)	mg/kg	-	-	-	-	-
2-Hexanone	mg/kg	-	-	-	-	-
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	mg/kg	-	-	-	-	-
Acetone	mg/kg	-	-	-	-	-
Benzene	mg/kg	-	-	-	-	-
Bromodichloromethane	mg/kg	-	-	-	-	-
Bromoform	mg/kg	-	-	-	-	-
Bromomethane (Methyl bromide)	mg/kg	-	-	-	-	-
Carbon disulfide	mg/kg	-	-	-	-	-
Carbon tetrachloride	mg/kg	-	-	-	-	-
Chlorobenzene	mg/kg	-	-	-	-	-
Chloroethane	mg/kg	-	-	-	-	-
Chloroform (Trichloromethane)	mg/kg	-	-	-	-	-
Chloromethane (Methyl chloride)	mg/kg	-	-	-	-	-
cis-1,2-Dichloroethene	mg/kg	-	-	-	-	-
cis-1,3-Dichloropropene	mg/kg	-	-	-	-	-
Cyclohexane	mg/kg	-	-	-	-	-
Dibromochloromethane	mg/kg	-	-	-	-	-
Dichlorodifluoromethane (CFC-12)	mg/kg	-	-	-	-	-
Ethylbenzene	mg/kg	-	-	-	-	-
Isopropyl benzene	mg/kg	-	-	-	-	-
Methyl acetate	mg/kg	-	-	-	-	-
Methyl cyclohexane	mg/kg	-	-	-	-	-
Methyl tert butyl ether (MTBE)	mg/kg	-	-	-	-	-
Methylene chloride	mg/kg	-	-	-	-	-
Styrene	mg/kg	-	-	-	-	-
Tetrachloroethene	mg/kg	-	-	-	-	-
Toluene	mg/kg	-	-	-	-	-
trans-1,2-Dichloroethene	mg/kg	-	-	-	-	-
trans-1,3-Dichloropropene	mg/kg	-	-	-	-	-
Trichloroethene	mg/kg	-	-	-	-	-

TABLE 3.8

PART 201 CRITERIA EXCEEDANCES - SOIL
2013 RFI REPORT
FORMER GENERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation		*WEST04*	*WEST04*	*WEST04*	*WEST04*	*WEST04*
Perimeter Status (1)		*Y*	*Y*	*Y*	*Y*	*Y*
Sample Location		*CRA-840SB*	*CRA-840SB*	*CRA-842SB*	*CRA-842SB*	*CRA-842SB*
Sample Identification (SO-17358-)		*032113-DR-014*	*032113-DR-015*	*032113-DR-010*	*032113-DR-011*	*032113-DR-012*
Sample Date		*3/21/2013*	*3/21/2013*	*3/21/2013*	*3/21/2013*	*3/21/2013*
Sample Depth		*(2-4) ft BGS*	*(4-6) ft BGS*	*(0-2) ft BGS*	*(2-4) ft BGS*	*(4-6) ft BGS*
Sample Type						
	Units					
VOCs Continued						
Trichlorofluoromethane (CFC-11)	mg/kg	-	-	-	-	-
Trifluorotrichloroethane (Freon 113)	mg/kg	-	-	-	-	-
Vinyl chloride	mg/kg	-	-	-	-	-
Xylenes (total)	mg/kg	-	-	-	-	-
Semi-Volatile Organic Compounds (SVOCs)						
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	mg/kg	-	-	-	-	-
2,4,5-Trichlorophenol	mg/kg	-	-	-	-	-
2,4,6-Trichlorophenol	mg/kg	-	-	-	-	-
2,4-Dichlorophenol	mg/kg	-	-	-	-	-
2,4-Dimethylphenol	mg/kg	-	-	-	-	-
2,4-Dinitrophenol	mg/kg	-	-	-	-	-
2,4-Dinitrotoluene	mg/kg	-	-	-	-	-
2,6-Dinitrotoluene	mg/kg	-	-	-	-	-
2-Chloronaphthalene	mg/kg	-	-	-	-	-
2-Chlorophenol	mg/kg	-	-	-	-	-
2-Methylnaphthalene	mg/kg	-	-	-	-	-
2-Methylphenol	mg/kg	-	-	-	-	-
2-Nitroaniline	mg/kg	-	-	-	-	-
2-Nitrophenol	mg/kg	-	-	-	-	-
3&4-Methylphenol	mg/kg	-	-	-	-	-
3,3'-Dichlorobenzidine	mg/kg	-	-	-	-	-
3-Nitroaniline	mg/kg	-	-	-	-	-
4,6-Dinitro-2-methylphenol	mg/kg	-	-	-	-	-
4-Bromophenyl phenyl ether	mg/kg	-	-	-	-	-
4-Chloro-3-methylphenol	mg/kg	-	-	-	-	-
4-Chloroaniline	mg/kg	-	-	-	-	-
4-Chlorophenyl phenyl ether	mg/kg	-	-	-	-	-
4-Nitroaniline	mg/kg	-	-	-	-	-
4-Nitrophenol	mg/kg	-	-	-	-	-
Acenaphthene	mg/kg	-	-	-	-	-
Acenaphthylene	mg/kg	-	-	-	-	-
Acetophenone	mg/kg	-	-	-	-	-
Anthracene	mg/kg	-	-	-	-	-
Atrazine	mg/kg	-	-	-	-	-
Benzaldehyde	mg/kg	-	-	-	-	-
Benzo(a)anthracene	mg/kg	-	-	-	-	-
Benzo(a)pyrene	mg/kg	-	-	-	-	-
Benzo(b)fluoranthene	mg/kg	-	-	-	-	-
Benzo(g,h,i)perylene	mg/kg	-	-	-	-	-
Benzo(k)fluoranthene	mg/kg	-	-	-	-	-
Biphenyl (1,1-Biphenyl)	mg/kg	-	-	-	-	-
bis(2-Chloroethoxy)methane	mg/kg	-	-	-	-	-
bis(2-Chloroethyl)ether	mg/kg	-	-	-	-	-
bis(2-Ethylhexyl)phthalate (DEHP)	mg/kg	-	-	-	-	-

TABLE 3.8

PART 201 CRITERIA EXCEEDANCES - SOIL
2013 RFI REPORT
FORMER GENERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation		*WEST04*	*WEST04*	*WEST04*	*WEST04*	*WEST04*
Perimeter Status (1)		*Y*	*Y*	*Y*	*Y*	*Y*
Sample Location		*CRA-840SB*	*CRA-840SB*	*CRA-842SB*	*CRA-842SB*	*CRA-842SB*
Sample Identification (SO-17358-)		*032113-DR-014*	*032113-DR-015*	*032113-DR-010*	*032113-DR-011*	*032113-DR-012*
Sample Date		*3/21/2013*	*3/21/2013*	*3/21/2013*	*3/21/2013*	*3/21/2013*
Sample Depth		*(2-4) ft BGS*	*(4-6) ft BGS*	*(0-2) ft BGS*	*(2-4) ft BGS*	*(4-6) ft BGS*
Sample Type						
	Units					
SVOCs Continued						
Butyl benzylphthalate (BBP)	mg/kg	-	-	-	-	-
Caprolactam	mg/kg	-	-	-	-	-
Carbazole	mg/kg	-	-	-	-	-
Chrysene	mg/kg	-	-	-	-	-
Dibenz(a,h)anthracene	mg/kg	-	-	-	-	-
Dibenzofuran	mg/kg	-	-	-	-	-
Diethyl phthalate	mg/kg	-	-	-	-	-
Dimethyl phthalate	mg/kg	-	-	-	-	-
Di-n-butylphthalate (DBP)	mg/kg	-	-	-	-	-
Di-n-octyl phthalate (DnOP)	mg/kg	-	-	-	-	-
Fluoranthene	mg/kg	-	-	-	-	-
Fluorene	mg/kg	-	-	-	-	-
Hexachlorobenzene	mg/kg	-	-	-	-	-
Hexachlorobutadiene	mg/kg	-	-	-	-	-
Hexachlorocyclopentadiene	mg/kg	-	-	-	-	-
Hexachloroethane	mg/kg	-	-	-	-	-
Indeno(1,2,3-cd)pyrene	mg/kg	-	-	-	-	-
Isophorone	mg/kg	-	-	-	-	-
Naphthalene	mg/kg	-	-	-	-	-
Nitrobenzene	mg/kg	-	-	-	-	-
N-Nitrosodi-n-propylamine	mg/kg	-	-	-	-	-
N-Nitrosodiphenylamine	mg/kg	-	-	-	-	-
Pentachlorophenol	mg/kg	-	-	-	-	-
Phenanthrene	mg/kg	-	-	-	-	-
Phenol	mg/kg	-	-	-	-	-
Pyrene	mg/kg	-	-	-	-	-
Metals						
Aluminum	mg/kg	-	-	-	-	-
Antimony	mg/kg	-	-	-	-	-
Arsenic	mg/kg	-	-	-	-	-
Barium	mg/kg	-	-	-	-	-
Beryllium	mg/kg	-	-	-	-	-
Cadmium	mg/kg	-	-	-	-	-
Calcium	mg/kg	-	-	-	-	-
Chromium	mg/kg	-	-	-	-	-
Chromium III (trivalent)	mg/kg	-	-	-	-	-
Chromium VI (hexavalent)	mg/kg	-	-	-	-	-
Cobalt	mg/kg	-	-	-	-	-
Copper	mg/kg	-	-	-	-	-
Iron	mg/kg	-	-	-	-	-
Lead	mg/kg	-	-	-	-	-
Lead - coarse fraction	mg/kg	-	-	-	-	-
Lead - fine fraction	mg/kg	-	-	-	-	-
Lead - total (calculated by fine/coarse fraction)	mg/kg	-	-	-	-	-
Magnesium	mg/kg	-	-	-	-	-

TABLE 3.8

PART 201 CRITERIA EXCEEDANCES - SOIL
2013 RFI REPORT
FORMER GENERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation		*WEST04*	*WEST04*	*WEST04*	*WEST04*	*WEST04*
Perimeter Status (1)		*Y*	*Y*	*Y*	*Y*	*Y*
Sample Location		*CRA-840SB*	*CRA-840SB*	*CRA-842SB*	*CRA-842SB*	*CRA-842SB*
Sample Identification (SO-17358-)		*032113-DR-014*	*032113-DR-015*	*032113-DR-010*	*032113-DR-011*	*032113-DR-012*
Sample Date		*3/21/2013*	*3/21/2013*	*3/21/2013*	*3/21/2013*	*3/21/2013*
Sample Depth		*(2-4) ft BGS*	*(4-6) ft BGS*	*(0-2) ft BGS*	*(2-4) ft BGS*	*(4-6) ft BGS*
Sample Type						
	Units					
Metals Continued						
Manganese	mg/kg	110	200	180	170	170
Mercury	mg/kg	-	-	-	-	-
Nickel	mg/kg	-	-	-	-	-
Potassium	mg/kg	-	-	-	-	-
Selenium	mg/kg	-	-	-	-	-
Silver	mg/kg	-	-	-	-	-
Sodium	mg/kg	-	-	-	-	-
Thallium	mg/kg	-	-	-	-	-
Vanadium	mg/kg	-	-	-	-	-
Zinc	mg/kg	-	-	-	-	-
Polychlorinated biphenyls (PCBs)						
Aroclor-1016 (PCB-1016)	mg/kg	-	-	-	-	-
Aroclor-1221 (PCB-1221)	mg/kg	-	-	-	-	-
Aroclor-1232 (PCB-1232)	mg/kg	-	-	-	-	-
Aroclor-1242 (PCB-1242)	mg/kg	-	-	-	-	-
Aroclor-1248 (PCB-1248)	mg/kg	-	-	-	-	-
Aroclor-1254 (PCB-1254)	mg/kg	-	-	-	-	-
Aroclor-1260 (PCB-1260)	mg/kg	-	-	-	-	-
Aroclor-1262 (PCB-1262)	mg/kg	-	-	-	-	-
Aroclor-1268 (PCB-1268)	mg/kg	-	-	-	-	-
Total PCBs	mg/kg	-	-	-	-	-

Notes

Michigan Part 201 generic clean up criteria (updated September 28, 2012)

ID - Insufficient data to develop criterion

NLV - Hazardous substance is not likely to volatilize under most conditions

NA - Criterion or value is not available

Perimeter Status (1) - N - non-perimeter, Y - perimeter

mg/kg - milligram/kilogram

Notes:

U - Not detected at the associated reporting limit.

J - Estimated concentration.

UJ - Not detected; associated reporting limit is estimated.

R - Rejected

TABLE 3.9

PART 201 CRITERIA EXCEEDANCES - GROUNDWATER
2013 RFI REPORT
FORMER GENRERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation		Residential	Non-Residential	Groundwater	Residential	Non-Residential	Groundwater	Water	Flammability and	Acute	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*
Aquifer		Drinking Water	Drinking Water	Surface Water	Groundwater	Groundwater	Contact	Solubility	Explosivity	Inhalation	*Intermediate*	*Intermediate*	*Intermediate*	*Intermediate*	*Intermediate*	*Shallow*	*Shallow*	*Shallow*
Perimeter Status (1)				Interface	Volatilization to	Volatilization to			Screening Levels	Screening Levels	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*
Sample Location					Indoor Air Inhalation	Indoor Air Inhalation					*CRA-717I*	*CRA-717I*	*CRA-804I*	*CRA-804I*	*CRA-804I*	*CRA-071M*	*CRA-071M*	*CRA-072M*
Sample Identification (GW-17358-)		a	b	c	d	e	f	g	h	i	*041712-DR-1048*	*041513-DR-102*	*041212-CB-1006*	*040913-EM-061*	*040913-EM-062*	*041612-DR-1020*	*040913-JY-059*	*041612-DR-1021*
Sample Date											*4/17/2012*	*4/15/2013*	*4/12/2012*	*4/9/2013*	*4/9/2013*	*4/16/2012*	*4/9/2013*	*4/16/2012*
Sample Type															*Duplicate*			
Volatile Organic Compounds (VOCs)	***Units***																	
1,1,1-Trichloroethane	mg/L	0.2	0.2	0.089	660	1300	1300	1330	ID	1300	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,1,2,2-Tetrachloroethane	mg/L	0.0085	0.035	0.078	12	77	4.7	2970	ID	ID	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,1,2-Trichloroethane	mg/L	0.005	0.005	0.33	17	110	21	4420	--	ID	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,1-Dichloroethane	mg/L	0.88	2.5	0.74	1000	2300	2400	5060	380	ID	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,1-Dichloroethene	mg/L	0.007	0.007	0.13	0.2	1.3	11	2250	97	140	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,2,4-Trichlorobenzene	mg/L	0.07	0.07	0.099	300	300	19	300	--	300	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.00034 J	0.001 U	0.001 U
1,2-Dibromo-3-chloropropane (DBCP)	mg/L	0.0002	0.0002	--	0.22	1.2	0.39	1.23	--	ID	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,2-Dibromoethane (Ethylene dibromide)	mg/L	0.00005	0.00005	0.0057	2.4	15	0.025	4200	ID	ID	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,2-Dichlorobenzene	mg/L	0.6	0.6	0.013	160	160	160	156	--	160	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,2-Dichloroethane	mg/L	0.005	0.005	0.36	9.6	59	19	8520	2500	ID	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,2-Dichloropropane	mg/L	0.005	0.005	0.23	16	36	16	2800	550	2800	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,3-Dichlorobenzene	mg/L	0.0066	0.019	0.028	18	41	2	111	ID	ID	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,4-Dichlorobenzene	mg/L	0.075	0.075	0.017	16	74	6.4	73.8	--	ID	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
2-Butanone (Methyl ethyl ketone) (MEK)	mg/L	13	38	2.2	240000	240000	240000	240000	ID	240000	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
2-Hexanone	mg/L	1	2.9	ID	4200	8700	5200	16000	--	ID	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	mg/L	1.8	5.2	ID	20000	20000	13000	20000	ID	20000	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Acetone	mg/L	0.73	2.1	1.7	1000000	1000000	31000	1000000	15000	1000000	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 UJ	0.01 U	0.01 UJ
Benzene	mg/L	0.005	0.005	0.2	5.6	35	11	1750	68	67	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Bromodichloromethane	mg/L	0.08	0.08	ID	4.8	37	14	6740	ID	ID	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Bromoform	mg/L	0.08	0.08	ID	470	3100	140	3100	ID	ID	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Bromomethane (Methyl bromide)	mg/L	0.01	0.029	0.035	4	9	70	14500	ID	ID	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Carbon disulfide	mg/L	0.8	2.3	ID	250	550	1200	1190	13	ID	0.00017 J	0.005 U	0.005 U	0.005 U	0.005 U	0.00035 J	0.005 U	0.005 U
Carbon tetrachloride	mg/L	0.005	0.005	0.045	0.37	2.4	4.6	793	ID	96	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Chlorobenzene	mg/L	0.1	0.1	0.025	210	470	86	472	160	ID	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Chloroethane	mg/L	0.43	1.7	1.1	5700	5700	440	5740	110	ID	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Chloroform (Trichloromethane)	mg/L	0.08	0.08	0.35	28	180	150	7920	ID	ID	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Chloromethane (Methyl chloride)	mg/L	0.26	1.1	ID	8.6	45	490	6340	36	210	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
cis-1,2-Dichloroethene	mg/L	0.07	0.07	0.62	93	210	200	3500	530	ID	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
cis-1,3-Dichloropropene	mg/L	--	--	--	--	--	--	--	--	--	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Cyclohexane	mg/L	--	--	--	--	--	--	--	--	--	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Dibromochloromethane	mg/L	0.08	0.08	ID	14	110	18	2600	ID	ID	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Dichlorodifluoromethane (CFC-12)	mg/L	1.7	4.8	ID	220	300	300	300	ID	ID	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Ethylbenzene	mg/L	0.074	0.074	0.018	110	170	170	169	43	170	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Isopropyl benzene	mg/L	0.8	2.3	0.028	56	56	56	56	29	ID	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Methyl acetate	mg/L	--	--	--	--	--	--	--	--	--	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Methyl cyclohexane	mg/L	--	--	--	--	--	--	--	--	--	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Methyl tert butyl ether (MTBE)	mg/L	0.04	0.04	7.1	47000	47000	610	46800	ID	ID	0.005 U	0.001 U	0.005 U	0.001 U	0.001 U	0.005 U	0.001 U	0.005 U
Methylene chloride	mg/L	0.005	0.005	1.5	220	1400	220	17000	ID	ID	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Styrene	mg/L	0.1	0.1	0.08	170	310	9.7	310	140	310	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Tetrachloroethene	mg/L	0.005	0.005	0.06	25	170	12	200	ID	200	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Toluene	mg/L	0.79	0.79	0.27	530	530	530	526	61	ID	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
trans-1,2-Dichloroethene	mg/L	0.1	0.1	1.5	85	200	220	6300	230	ID	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
trans-1,3-Dichloropropene	mg/L	--	--	--	--	--	--	--	--	--	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Trichloroethene	mg/L	0.005	0.005	0.2	2.2	4.9	22	1100	ID	1100	0.001 U	0.001 U	0.001 U	0.00027 J	0.00025 J	0.001 U	0.001 U	0.001 U
Trichlorofluoromethane (CFC-11)	mg/L	2.6	7.3	--	1100	1100	1100	1100	ID	1100	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Trifluorotrichloroethane (Freon 113)	mg/L	170	170	0.032	170	170	170	170	ID	170	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Vinyl chloride	mg/L	0.002	0.002	0.013	1.1	13	1	2760	33	ID	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Xylenes (total)	mg/L	0.28	0.28	0.041	190	190	190	186	70	190	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U

TABLE 3.9

PART 201 CRITERIA EXCEEDANCES - GROUNDWATER
2013 RFI REPORT
FORMER GENRERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation		Residential	Non-Residential	Groundwater	Residential	Non-Residential	Groundwater	Water	Flammability and	Acute	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*
Aquifer		Drinking Water	Drinking Water	Surface Water	Groundwater	Groundwater	Contact	Solubility	Explosivity	Inhalation	*Intermediate*	*Intermediate*	*Intermediate*	*Intermediate*	*Intermediate*	*Shallow*	*Shallow*	*Shallow*
Perimeter Status (1)				Interface	Volatilization to	Volatilization to			Screening Levels	Screening Levels	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*
Sample Location					Indoor Air Inhalation	Indoor Air Inhalation					*CRA-717I*	*CRA-717I*	*CRA-804I*	*CRA-804I*	*CRA-804I*	*CRA-071M*	*CRA-071M*	*CRA-072M*
Sample Identification (GW-17358-)		a	b	c	d	e	f	g	h	i	*041712-DR-1048*	*041513-DR-102*	*041212-CB-1006*	*040913-EM-061*	*040913-EM-062*	*041612-DR-1020*	*040913-JY-059*	*041612-DR-1021*
Sample Date											*4/17/2012*	*4/15/2013*	*4/12/2012*	*4/9/2013*	*4/9/2013*	*4/16/2012*	*4/9/2013*	*4/16/2012*
Sample Type															*Duplicate*			
Semi-Volatile Organic Compounds (SVOCs)																		
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	mg/L	--	--	--	--	--	--	--	--	--	0.005 U	0.0051 U	0.0053 U	0.005 U	0.0053 U	0.0051 U	0.0049 U	0.0048 U
2,4,5-Trichlorophenol	mg/L	0.73	2.1	--	NLV	NLV	170	1200	ID	ID	0.005 U	0.0051 U	0.0053 U	0.005 U	0.0053 U	0.0051 U	0.0049 U	0.0048 U
2,4,6-Trichlorophenol	mg/L	0.12	0.47	0.005	NLV	NLV	10	800	ID	ID	0.004 U	0.004 U	0.0043 U	0.004 U	0.0042 U	0.004 U	0.0039 U	0.0038 U
2,4-Dichlorophenol	mg/L	0.073	0.21	0.011	NLV	NLV	48	4500	ID	ID	0.01 U	0.01 U	0.011 U	0.0099 U	0.011 U	0.01 U	0.0098 U	0.0096 U
2,4-Dimethylphenol	mg/L	0.37	1	0.38	NLV	NLV	520	7870	ID	ID	0.005 U	0.0051 U	0.0053 U	0.005 U	0.0053 U	0.0051 U	0.0049 U	0.0048 U
2,4-Dinitrophenol	mg/L	--	--	--	--	--	--	--	--	--	0.02 U	0.02 U	0.021 U	0.02 U	0.021 U	0.02 U	0.02 U	0.019 U
2,4-Dinitrotoluene	mg/L	0.0077	0.032	--	NLV	NLV	8.6	270	ID	ID	0.005 U	0.0051 U	0.0053 U	0.005 U	0.0053 U	0.0051 U	0.0049 U	0.0048 U
2,6-Dinitrotoluene	mg/L	--	--	--	--	--	--	--	--	--	0.005 U	0.0051 U	0.0053 U	0.005 U	0.0053 U	0.0051 U	0.0049 U	0.0048 U
2-Chloronaphthalene	mg/L	1.8	5.2	--	ID	ID	6.7	6.74	ID	ID	0.005 U	0.0051 U	0.0053 U	0.005 U	0.0053 U	0.0051 U	0.0049 U	0.0048 U
2-Chlorophenol	mg/L	0.045	0.13	0.018	ID	ID	94	22000	ID	ID	0.005 U	0.0051 U	0.0053 U	0.005 U	0.0053 U	0.0051 U	0.0049 U	0.0048 U
2-Methylnaphthalene	mg/L	0.26	0.75	0.019	25	25	25	24.6	ID	ID	0.00022 J	0.0051 U	0.0053 U	0.005 U	0.0053 U	0.0026 J	0.0025 J	0.0048 U
2-Methylphenol	mg/L	0.37	1	0.03	NLV	NLV	810	28000	--	ID	0.005 U	0.0051 U	0.0053 U	0.005 U	0.0053 U	0.0051 U	0.0049 U	0.0048 U
2-Nitroaniline	mg/L	--	--	--	--	--	--	--	--	--	0.02 U	0.02 U	0.021 U	0.02 U	0.021 U	0.02 U	0.02 U	0.019 U
2-Nitrophenol	mg/L	0.02	0.058	ID	NLV	NLV	79	2500	ID	ID	0.005 U	0.0051 U	0.0053 U	0.005 U	0.0053 U	0.0051 U	0.0049 U	0.0048 U
3&4-Methylphenol	mg/L	0.37	1	0.03	NLV	NLV	810	28000	--	ID	0.005 U	0.0051 U	0.0053 U	0.005 U	0.0053 U	0.0051 U	0.0049 U	0.0048 U
3,3'-Dichlorobenzidine	mg/L	0.0011	0.0043	0.0003	NLV	NLV	0.18	3.11	ID	ID	0.001 U	0.001 U	0.0011 U	0.00099 U	0.0011 U	0.001 U	0.00098 U	0.00096 U
3-Nitroaniline	mg/L	--	--	--	--	--	--	--	--	--	0.02 U	0.02 U	0.021 U	0.02 U	0.021 U	0.02 U	0.02 U	0.019 U
4,6-Dinitro-2-methylphenol	mg/L	0.02	0.02	--	NLV	NLV	9.5	200	ID	ID	0.02 U	0.02 U	0.021 U	0.02 U	0.021 U	0.02 U	0.02 U	0.019 U
4-Bromophenyl phenyl ether	mg/L	--	--	--	--	--	--	--	--	--	0.005 U	0.0051 U	0.0053 U	0.005 U	0.0053 U	0.0051 U	0.0049 U	0.0048 U
4-Chloro-3-methylphenol	mg/L	0.15	0.42	0.0074	NLV	NLV	79	3900	ID	ID	0.005 U	0.0051 U	0.0053 U	0.005 U	0.0053 U	0.0051 U	0.0049 U	0.0048 U
4-Chloroaniline	mg/L	--	--	--	--	--	--	--	--	--	0.01 U	0.01 U	0.011 U	0.0099 U	0.011 U	0.01 U	0.0098 U	0.0096 U
4-Chlorophenyl phenyl ether	mg/L	--	--	--	--	--	--	--	--	--	0.005 U	0.0051 U	0.0053 U	0.005 U	0.0053 U	0.0051 U	0.0049 U	0.0048 U
4-Nitroaniline	mg/L	--	--	--	--	--	--	--	--	--	0.02 U	0.02 U	0.021 U	0.02 U	0.021 U	0.02 U	0.02 U	0.019 U
4-Nitrophenol	mg/L	--	--	--	--	--	--	--	--	--	0.02 U	0.02 U	0.021 U	0.02 U	0.021 U	0.02 U	0.02 U	0.019 U
Acenaphthene	mg/L	1.3	3.8	0.038	4.2	4.2	4.2	4.24	ID	ID	0.005 U	0.0051 U	0.0053 U	0.005 U	0.0053 U	0.012	0.015	0.0048 U
Acenaphthylene	mg/L	0.052	0.15	ID	3.9	3.9	3.9	3.93	ID	ID	0.005 U	0.0051 U	0.0053 U	0.005 U	0.0053 U	0.0051 U	0.00029 J	0.0048 U
Acetophenone	mg/L	1.5	4.4	--	6100	6100	6100	6100	ID	ID	0.005 U	0.0051 U	0.0053 U	0.005 U	0.0053 U	0.0051 U	0.0049 U	0.0048 U
Anthracene	mg/L	0.043	0.043	ID	0.043	0.043	0.043	0.0434	ID	ID	0.005 U	0.0051 U	0.0053 U	0.005 U	0.0053 U	0.0039 J	0.0049	0.0048 U
Atrazine	mg/L	0.003	0.003	0.0073	NLV	NLV	5.4	70	ID	ID	0.003 U	0.003 U	0.0032 U	0.003 U	0.0032 U	0.003 U	0.0029 U	0.0029 U
Benzaldehyde	mg/L	--	--	--	--	--	--	--	--	--	0.005 U	0.0051 U	0.0053 U	0.005 U	0.0053 U	0.0051 U	0.0049 U	0.0048 U
Benzo(a)anthracene	mg/L	0.0021	0.0085	ID	NLV	NLV	0.0094	0.0094	ID	ID	0.001 U	0.001 U	0.0011 U	0.00099 U	0.0011 U	0.00041 J	0.00057 J	0.00096 U
Benzo(a)pyrene	mg/L	0.005	0.005	ID	NLV	NLV	0.001	0.00162	ID	ID	0.001 U	0.001 U	0.0011 U	0.00099 U	0.0011 U	0.001 U	0.00028 J	0.00096 U
Benzo(b)fluoranthene	mg/L	0.0015	0.0015	ID	ID	ID	0.0015	0.0015	ID	ID	0.001 U	0.001 U	0.0011 U	0.00099 U	0.0011 U	0.001 U	0.000098 J	0.00096 U
Benzo(g,h,i)perylene	mg/L	0.001	0.001	--	NLV	NLV	0.001	0.00026	ID	ID	0.001 U	0.001 U	0.0011 U	0.00099 U	0.0011 U	0.001 U	0.00098 U	0.00096 U
Benzo(k)fluoranthene	mg/L	0.001	0.001	--	NLV	NLV	0.001	0.0008	ID	ID	0.001 U	0.001 U	0.0011 U	0.00099 U	0.0011 U	0.001 U	0.00098 U	0.00096 U
Biphenyl (1,1-Biphenyl)	mg/L	--	--	--	--	--	--	--	--	--	0.005 U	0.0051 U	0.0053 U	0.005 U	0.0053 U	0.0013 J	0.0016 J	0.0048 U
bis(2-Chloroethoxy)methane	mg/L	--	--	--	--	--	--	--	--	--	0.005 U	0.0051 U	0.0053 U	0.005 U	0.0053 U	0.0051 U	0.0049 U	0.0048 U
bis(2-Chloroethyl)ether	mg/L	0.002	0.0083	0.001	38	210	5.7	17200	17000	17000	0.001 U	0.001 U	0.0011 U	0.00099 U	0.0011 U	0.001 U	0.00098 U	0.00096 U
bis(2-Ethylhexyl)phthalate (DEHP)	mg/L	0.006	0.006	0.025	NLV	NLV	0.32	0.34	--	0.34	0.0021 J	0.0051 U	0.0053 U	0.005 U	0.0053 U	0.0051 U	0.0049 U	0.0011 J
Butyl benzylphthalate (BBP)	mg/L	1.2	2.7	0.067	NLV	NLV	2.7	2.69	ID	ID	0.005 U	0.0051 U	0.0053 U	0.005 U	0.0053 U	0.0011 J	0.002 J	0.0048 U
Caprolactam	mg/L	5.8	17	--	NLV	NLV	390000	5250000	--	1000000	0.01 U	0.0022 J	0.011 U	0.0099 U	0.011 U	0.01 U	0.0098 U	0.0096 U
Carbazole	mg/L	0.085	0.35	0.01	NLV	NLV	7.4	7.48	ID	ID	0.01 U	0.01 U	0.011 U	0.0099 U	0.011 U	**0.014[c]**	**0.012[c]**	0.0096 U
Chrysene	mg/L	0.0016	0.0016	ID	ID	ID	0.0016	0.0016	ID	ID	0.001 U	0.001 U	0.0011 U	0.00099 U	0.0011 U	0.00045 J	0.00054 J	0.00096 U
Dibenz(a,h)anthracene	mg/L	0.002	0.002	ID	NLV	NLV	0.002	0.00249	ID	ID	0.002 U	0.002 U	0.0021 U	0.002 U	0.0021 U	0.002 U	0.002 U	0.0019 U
Dibenzofuran	mg/L	ID	ID	0.004	10	10	ID	10	ID	ID	0.004 U	0.004 U	0.0043 U	0.004 U	0.0042 U	**0.013[c]**	**0.015[c]**	0.0038 U
Diethyl phthalate	mg/L	5.5	16	0.11	NLV	NLV	1100	1080	--	ID	0.005 U	0.0051 U	0.0053 U	0.005 U	0.0053 U	0.0051 U	0.0049 U	0.0048 U
Dimethyl phthalate	mg/L	73	210	--	NLV	NLV	4200	4190	--	ID	0.005 U	0.0051 U	0.0053 U	0.005 U	0.0053 U	0.0051 U	0.0049 U	0.0048 U
Di-n-butylphthalate (DBP)	mg/L	0.88	2.5	0.0097	NLV	NLV	11	11.2	--	ID	0.005 U	0.0051 U	0.0053 U	0.005 U	0.0053 U	0.0051 U	0.00069 J	0.0048 U
Di-n-octyl phthalate (DnOP)	mg/L	0.13	0.38	ID	NLV	NLV	0.4	3	ID	ID	0.005 U	0.0051 U	0.0053 U	0.005 U	0.0053 U	0.0051 U	0.0049 U	0.0048 U
Fluoranthene	mg/L	0.21	0.21	0.0016	0.21	0.21	0.21	0.206	ID	ID	0.001 U	0.001 U	0.0011 U	0.00099 U	0.0011 U	**0.0075[c]**	**0.012[c]**	0.00096 U
Fluorene	mg/L	0.88	2	0.012	2	2	2	1.98	ID	ID	0.005 U	0.0051 U	0.0053 U	0.005 U	0.0053 U	0.011	**0.016[c]**	0.0048 U
Hexachlorobenzene	mg/L	0.001	0.001	0.0002	0.44	3	0.0046	6.2	ID	ID	0.0002 U	0.0002 U	0.00021 U	0.0002 U	0.00021 U	0.0002 U	0.0002 U	0.00019 U

TABLE 3.9

PART 201 CRITERIA EXCEEDANCES - GROUNDWATER
2013 RFI REPORT
FORMER GENRERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation		Residential	Non-Residential	Groundwater	Residential	Non-Residential	Groundwater	Water	Flammability and	Acute	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*
Aquifer		Drinking Water	Drinking Water	Surface Water	Groundwater	Groundwater	Contact	Solubility	Explosivity	Inhalation	*Intermediate*	*Intermediate*	*Intermediate*	*Intermediate*	*Intermediate*	*Shallow*	*Shallow*	*Shallow*
Perimeter Status (1)				Interface	Volatilization to	Volatilization to			Screening Levels	Screening Levels	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*
Sample Location					Indoor Air Inhalation	Indoor Air Inhalation					*CRA-717I*	*CRA-717I*	*CRA-804I*	*CRA-804I*	*CRA-804I*	*CRA-071M*	*CRA-071M*	*CRA-072M*
Sample Identification (GW-17358-)		a	b	c	d	e	f	g	h	i	*041712-DR-1048*	*041513-DR-102*	*041212-CB-1006*	*040913-EM-061*	*040913-EM-062*	*041612-DR-1020*	*040913-JY-059*	*041612-DR-1021*
Sample Date											*4/17/2012*	*4/15/2013*	*4/12/2012*	*4/9/2013*	*4/9/2013*	*4/16/2012*	*4/9/2013*	*4/16/2012*
Sample Type															*Duplicate*			
SVOCs Continued																		
Hexachlorobutadiene	mg/L	0.015	0.042	0.000053	1.6	3.2	0.4	3.23	ID	ID	0.001 U	0.001 U	0.0011 U	0.00099 U	0.0011 U	0.001 U	0.00098 U	0.00096 U
Hexachlorocyclopentadiene	mg/L	0.05	0.05	ID	0.13	0.42	1.6	1.8	ID	ID	0.005 U	0.0051 U	0.0053 U	R	R	0.0051 U	R	0.0048 U
Hexachloroethane	mg/L	0.0073	0.021	0.0067	27	50	1.9	50	ID	ID	0.005 U	0.0051 U	0.0053 U	0.005 U	0.0053 U	0.0051 U	0.0049 U	0.0048 U
Indeno(1,2,3-cd)pyrene	mg/L	0.002	0.002	ID	NLV	NLV	0.002	0.000022	ID	ID	0.002 U	0.002 U	0.0021 U	0.002 U	0.0021 U	0.002 U	0.002 U	0.0019 U
Isophorone	mg/L	0.77	3.1	1.3	NLV	NLV	990	12000	--	12000	0.005 U	0.0051 U	0.0053 U	0.005 U	0.0053 U	0.0051 U	0.0049 U	0.0048 U
Naphthalene	mg/L	0.52	1.5	0.011	31	31	31	31	--	31	0.00023 J	0.0051 U	0.0053 U	0.005 U	0.0053 U	0.0055	0.0043 J	0.0048 U
Nitrobenzene	mg/L	0.0034	0.0096	0.18	280	550	11	2090	--	ID	0.003 U	0.003 U	0.0032 U	0.003 U	0.0032 U	0.003 U	0.0029 U	0.0029 U
N-Nitrosodi-n-propylamine	mg/L	0.005	0.005	--	NLV	NLV	0.36	9890	ID	ID	0.005 U	0.0051 U	0.0053 U	0.005 U	0.0053 U	0.0051 U	0.0049 U	0.0048 U
N-Nitrosodiphenylamine	mg/L	0.27	1.1	--	NLV	NLV	35	35.1	ID	ID	0.005 U	0.0051 U	0.0053 U	0.005 U	0.0053 U	0.0051 U	0.0049 U	0.0048 U
Pentachlorophenol	mg/L	0.001	0.001	0.0028	NLV	NLV	0.2	1850	ID	ID	0.005 U	0.0051 U	0.0053 U	0.005 U	0.0053 U	0.0051 U	0.0049 U	0.0048 U
Phenanthrene	mg/L	0.052	0.15	0.002	1	1	1	1	ID	ID	0.002 U	0.002 U	0.0021 U	0.002 U	0.0021 U	**0.011[c]**	**0.0069[c]**	0.0019 U
Phenol	mg/L	4.4	13	0.45	NLV	NLV	29000	82800	--	ID	0.005 U	0.0051 U	0.0053 U	0.005 U	0.0053 U	0.0051 U	0.0049 U	0.0048 U
Pyrene	mg/L	0.14	0.14	ID	0.14	0.14	0.14	0.135	ID	ID	0.005 U	0.0051 U	0.0053 U	0.005 U	0.0053 U	0.0042 J	0.0067	0.0048 U
Metals																		
Aluminum	mg/L	0.05	0.05	--	NLV	NLV	64000	--	ID	ID	**0.16[b]**	**0.13 J[b]**	**0.055[b]**	0.05 U	0.05 U	0.024 J	0.05 U	0.05 U
Aluminum (dissolved)	mg/L	0.05	0.05	--	NLV	NLV	64000	--	ID	ID	-	-	-	-	-	-	-	-
Antimony	mg/L	0.006	0.006	0.13	NLV	NLV	68	--	ID	ID	0.0002 J	0.002 U	0.002 U	0.002 U	0.002 U	0.0004 J	0.002 U	0.00022 J
Antimony (dissolved)	mg/L	0.006	0.006	0.13	NLV	NLV	68	--	ID	ID	-	-	-	-	-	-	-	-
Arsenic	mg/L	0.01	0.01	0.01	NLV	NLV	4.3	--	ID	ID	**0.018[bc]**	**0.015[bc]**	**0.037[bc]**	**0.031[bc]**	**0.033[bc]**	**0.019[bc]**	0.0054	0.0022 J
Arsenic (dissolved)	mg/L	0.01	0.01	0.01	NLV	NLV	4.3	--	ID	ID	-	-	-	-	-	-	-	-
Barium	mg/L	2	2	1.87	NLV	NLV	14000	--	ID	ID	0.45	0.46	0.38	0.33	0.31	0.26	0.23	0.23
Barium (dissolved)	mg/L	2	2	1.87	NLV	NLV	14000	--	ID	ID	-	-	-	-	-	-	-	-
Beryllium	mg/L	0.004	0.004	0.075	NLV	NLV	290	--	ID	ID	0.001 U	0.001 U	0.001 U	0.00044 J	0.001 U	0.001 U	0.001 U	0.001 U
Beryllium (dissolved)	mg/L	0.004	0.004	0.075	NLV	NLV	290	--	ID	ID	-	-	-	-	-	-	-	-
Cadmium	mg/L	0.005	0.005	0.006	NLV	NLV	190	--	ID	ID	0.001 U	0.001 U	0.001 U	0.00025 J	0.001 U	0.001 U	0.001 U	0.001 U
Cadmium (dissolved)	mg/L	0.005	0.005	0.006	NLV	NLV	190	--	ID	ID	-	-	-	-	-	-	-	-
Calcium	mg/L	--	--	--	--	--	--	--	--	--	-	-	-	-	-	-	-	-
Chromium	mg/L	0.1	0.1	0.011	NLV	NLV	460	--	ID	ID	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Chromium (dissolved)	mg/L	0.1	0.1	0.011	NLV	NLV	460	--	ID	ID	-	-	-	-	-	-	-	-
Chromium III (trivalent)	mg/L	0.1	0.1	0.23	NLV	NLV	290000	--	ID	ID	0.01 U	-	-	-	-	-	-	-
Chromium VI (hexavalent)	mg/L	0.1	0.1	0.011	NLV	NLV	460	--	ID	ID	0.0024 J	-	-	-	-	-	-	-
Cobalt	mg/L	0.04	0.1	0.1	NLV	NLV	2400	--	ID	ID	0.00032 J	0.00043 J	0.02 U	0.00038 J	0.00021 J	0.00054 J	0.00012 J	0.00057 J
Cobalt (dissolved)	mg/L	0.04	0.1	0.1	NLV	NLV	2400	--	ID	ID	-	-	-	-	-	-	-	-
Copper	mg/L	1	1	0.029	NLV	NLV	7400	--	ID	ID	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.00092 J	0.004 U
Copper (dissolved)	mg/L	1	1	0.029	NLV	NLV	7400	--	ID	ID	-	-	-	-	-	-	-	-
Iron	mg/L	0.3	0.3	--	NLV	NLV	58000	--	ID	ID	**1.5[b]**	**0.9[b]**	**3.9[b]**	**3.7[b]**	**3.9[b]**	**4.7[b]**	**1.3[b]**	**0.35[b]**
Iron (dissolved)	mg/L	0.3	0.3	--	NLV	NLV	58000	--	ID	ID	-	-	-	-	-	-	-	-
Lead	mg/L	0.004	0.004	0.059	NLV	NLV	ID	--	ID	ID	0.0005 J	0.00041 J	0.003 U	0.0019 J	0.00022 J	0.001 J	0.00019 J	0.00018 J
Lead (dissolved)	mg/L	0.004	0.004	0.059	NLV	NLV	ID	--	ID	ID	-	-	-	-	-	-	-	-
Magnesium	mg/L	400	1100	--	NLV	NLV	1000000	--	ID	ID	-	-	-	-	-	-	-	-
Manganese	mg/L	0.05	0.05	6.52	NLV	NLV	9100	--	ID	ID	**0.13[b]**	**0.089[b]**	**0.15[b]**	**0.097[b]**	**0.095[b]**	**0.41[b]**	**0.2[b]**	**0.052[b]**
Manganese (dissolved)	mg/L	0.05	0.05	6.52	NLV	NLV	9100	--	ID	ID	-	-	-	-	-	-	-	-
Mercury	mg/L	0.002	0.002	0.0000013	0.056	0.056	0.056	0.056	ID	ID	0.04 U	0.0002 U	0.04 U	0.0002 U	0.0002 U	0.04 U	0.0002 U	0.04 U
Mercury (dissolved)	mg/L	0.002	0.002	0.0000013	0.056	0.056	0.056	0.056	ID	ID	-	-	-	-	-	-	-	-
Nickel	mg/L	0.1	0.1	0.16	NLV	NLV	74000	--	ID	ID	0.0014 J	0.02 J	0.02 U	0.00075 J	0.0005 J	0.0047 J	0.0029 J	0.0033 J
Nickel (dissolved)	mg/L	0.1	0.1	0.16	NLV	NLV	74000	--	ID	ID	-	-	-	-	-	-	-	-
Potassium	mg/L	--	--	--	--	--	--	--	--	--	-	-	-	-	-	-	-	-
Selenium	mg/L	0.05	0.05	0.005	NLV	NLV	970	--	ID	ID	0.005 U	0.005 U	0.005 U	0.00062 J	0.005 U	0.005 U	0.005 U	0.005
Selenium (dissolved)	mg/L	0.05	0.05	0.005	NLV	NLV	970	--	ID	ID	-	-	-	-	-	-	-	-
Silver	mg/L	0.034	0.098	0.0002	NLV	NLV	1500	--	ID	ID	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Silver (dissolved)	mg/L	0.034	0.098	0.0002	NLV	NLV	1500	--	ID	ID	-	-	-	-	-	-	-	-
Sodium	mg/L	120	350	--	NLV	NLV	1000000	--	ID	ID	-	-	-	-	-	-	-	-

TABLE 3.9

PART 201 CRITERIA EXCEEDANCES - GROUNDWATER
2013 RFI REPORT
FORMER GENRERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation		Residential	Non-Residential	Groundwater	Residential	Non-Residential	Groundwater	Water	Flammability and	Acute	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*
Aquifer		Drinking Water	Drinking Water	Surface Water	Groundwater	Groundwater	Contact	Solubility	Explosivity	Inhalation	*Intermediate*	*Intermediate*	*Intermediate*	*Intermediate*	*Intermediate*	*Shallow*	*Shallow*	*Shallow*
Perimeter Status (1)				Interface	Volatilization to	Volatilization to			Screening Levels	Screening Levels	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*
Sample Location					Indoor Air Inhalation	Indoor Air Inhalation					*CRA-717I*	*CRA-717I*	*CRA-804I*	*CRA-804I*	*CRA-804I*	*CRA-071M*	*CRA-071M*	*CRA-072M*
Sample Identification (GW-17358-)		a	b	c	d	e	f	g	h	i	*041712-DR-1048*	*041513-DR-102*	*041212-CB-1006*	*040913-EM-061*	*040913-EM-062*	*041612-DR-1020*	*040913-JY-059*	*041612-DR-1021*
Sample Date											*4/17/2012*	*4/15/2013*	*4/12/2012*	*4/9/2013*	*4/9/2013*	*4/16/2012*	*4/9/2013*	*4/16/2012*
Sample Type															*Duplicate*			
Metals Continued																		
Thallium	mg/L	0.002	0.002	0.0037	NLV	NLV	13	--	ID	ID	0.002 U	0.002 U	0.002 U	0.0014 J	0.00058 J	0.002 U	0.002 U	0.002 U
Thallium (dissolved)	mg/L	0.002	0.002	0.0037	NLV	NLV	13	--	ID	ID	-	-	-	-	-	-	-	-
Vanadium	mg/L	0.0045	0.062	0.027	NLV	NLV	970	--	ID	ID	0.00044 J	0.00053 J	0.004 U	0.004 U	0.004 U	0.00058 J	0.004 U	0.004 U
Vanadium (dissolved)	mg/L	0.0045	0.062	0.027	NLV	NLV	970	--	ID	ID	-	-	-	-	-	-	-	-
Zinc	mg/L	2.4	5	0.38	NLV	NLV	110000	--	ID	ID	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Zinc (dissolved)	mg/L	2.4	5	0.38	NLV	NLV	110000	--	ID	ID	-	-	-	-	-	-	-	-
Polychlorinated Biphenyls (PCBs)																		
Aroclor-1016 (PCB-1016)	mg/L	--	--	--	--	--	--	--	--	--	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.000098 U	0.0001 U	0.000095 U	0.000097 U
Aroclor-1221 (PCB-1221)	mg/L	--	--	--	--	--	--	--	--	--	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.000098 U	0.0001 U	0.000095 U	0.000097 U
Aroclor-1232 (PCB-1232)	mg/L	--	--	--	--	--	--	--	--	--	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.000098 U	0.0001 U	0.000095 U	0.000097 U
Aroclor-1242 (PCB-1242)	mg/L	--	--	--	--	--	--	--	--	--	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.000098 U	0.0001 U	0.000095 U	0.000097 U
Aroclor-1248 (PCB-1248)	mg/L	--	--	--	--	--	--	--	--	--	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.000098 U	0.0001 U	0.000095 U	0.000097 U
Aroclor-1254 (PCB-1254)	mg/L	--	--	--	--	--	--	--	--	--	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.000098 U	0.0001 U	0.000095 U	0.000097 U
Aroclor-1260 (PCB-1260)	mg/L	--	--	--	--	--	--	--	--	--	0.0001 U	0.0001 U	0.0001 UJ	0.0001 U	0.000098 U	0.0001 U	0.000095 U	0.000097 U
Aroclor-1262 (PCB-1262)	mg/L	--	--	--	--	--	--	--	--	--	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.000098 U	0.0001 U	0.000095 U	0.000097 U
Aroclor-1268 (PCB-1268)	mg/L	--	--	--	--	--	--	--	--	--	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.000098 U	0.0001 U	0.000095 U	0.000097 U
Total PCBs	mg/L	0.0005	0.0005	0.0002	0.045	0.045	0.0033	0.0447	ID	ID	ND	ND	ND	ND	ND	ND	ND	ND
General Chemistry																		
Cyanide (amenable)	mg/L	0.2	0.2	--	NLV	NLV	57	--	ID	ID	-	-	-	-	-	-	-	-
Phosphorus	mg/L	63	240	EE	NLV	NLV	ID	--	ID	ID	-	0.037 J	-	0.071 J	0.1 U	-	-	-
Field Parameters																		
Turbidity, field	NTU	--	--	--	--	--	--	--	--	--	6.92	3.39	9.52	22.9	22.9	2.88	1.49	3.06

Notes
Michigan Part 201 generic clean up criteria (updated September 28, 2012)
ID - Insufficient data to develop criterion
NLV - Hazardous substance is not likely to volatilize under most conditions
NA - Criterion or value is not available

Perimeter Status (1) - N - non-perimeter, Y - perimeter
mg/L - miligram per liter
NTU - Nephelometric Turbidity Unit

Notes:
U - Not detected at the associated reporting limit.
J - Estimated concentration.
UJ - Not detected; associated reporting limit is estimated.

TABLE 3.9

PART 201 CRITERIA EXCEEDANCES - GROUNDWATER
2013 RFI REPORT
FORMER GENRERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation		*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*
Aquifier		*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*
Perimeter Status (1)		*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*
Sample Location		*CRA-072M*	*CRA-073M*	*CRA-073M*	*CRA-074M*	*CRA-074M*	*CRA-094M*	*CRA-094M*	*CRA-789M*	*CRA-789M*	*CRA-790M*	*CRA-790M*	*CRA-792M*	*CRA-792M*	*CRA-795M*	*CRA-795M*	*CRA-798M*	*CRA-798M*
Sample Identification (GW-17358-)		*040813-DR-052*	*041612-DR-1022*	*040813-DR-051*	*041612-DR-1023*	*040813-DR-050*	*041212-CB-1007*	*040913-EM-065*	*031312-DR-070*	*040913-JY-066*	*041612-JY-1024*	*040913-JY-060*	*041612-JY-1025*	*040913-JY-058*	*041612-JY-1026*	*040813-DR-049*	*041612-JY-1029*	*040513-JY-036*
Sample Date		*4/8/2013*	*4/16/2012*	*4/8/2013*	*4/16/2012*	*4/8/2013*	*4/12/2012*	*4/9/2013*	*3/13/2012*	*4/9/2013*	*4/16/2012*	*4/9/2013*	*4/16/2012*	*4/9/2013*	*4/16/2012*	*4/8/2013*	*4/16/2012*	*4/5/2013*
Sample Type																		
Volatile Organic Compounds (VOCs)	***Units***																	
1,1,1-Trichloroethane	mg/L	0.001 U	0.001 U	0.0014 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,1,2,2-Tetrachloroethane	mg/L	0.001 U	0.001 U	0.0014 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,1,2-Trichloroethane	mg/L	0.001 U	0.001 U	0.0014 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,1-Dichloroethane	mg/L	0.001 U	0.00028 J	0.0014 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,1-Dichloroethene	mg/L	0.001 U	0.00055 J	0.00068 J	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,2,4-Trichlorobenzene	mg/L	0.001 U	0.001 U	0.0014 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,2-Dibromo-3-chloropropane (DBCP)	mg/L	0.001 U	0.001 U	0.0014 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,2-Dibromoethane (Ethylene dibromide)	mg/L	0.001 U	0.001 U	0.0014 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,2-Dichlorobenzene	mg/L	0.001 U	0.001 U	0.0014 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,2-Dichloroethane	mg/L	0.001 U	0.001 U	0.0014 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,2-Dichloropropane	mg/L	0.001 U	0.001 U	0.0014 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,3-Dichlorobenzene	mg/L	0.001 U	0.001 U	0.0014 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,4-Dichlorobenzene	mg/L	0.001 U	0.001 U	0.0014 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
2-Butanone (Methyl ethyl ketone) (MEK)	mg/L	0.01 U	0.01 U	0.014 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
2-Hexanone	mg/L	0.01 U	0.01 U	0.014 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	mg/L	0.01 U	0.01 U	0.014 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Acetone	mg/L	0.01 U	0.01 UJ	0.014 U	0.01 UJ	0.01 U	0.01 U	0.01 U	0.0012 J	0.01 U	0.01 UJ	0.01 U	0.01 UJ	0.01 U	0.01 UJ	0.01 U	0.01 UJ	0.01 UJ
Benzene	mg/L	0.001 U	0.001 U	0.0014 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Bromodichloromethane	mg/L	0.001 U	0.001 U	0.0014 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Bromoform	mg/L	0.001 U	0.001 U	0.0014 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Bromomethane (Methyl bromide)	mg/L	0.001 U	0.001 U	0.0014 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Carbon disulfide	mg/L	0.005 U	0.005 U	0.0072 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Carbon tetrachloride	mg/L	0.001 U	0.001 U	0.0014 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Chlorobenzene	mg/L	0.001 U	0.001 U	0.0014 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Chloroethane	mg/L	0.001 U	0.001 U	0.0014 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Chloroform (Trichloromethane)	mg/L	0.001 U	0.001 U	0.0014 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Chloromethane (Methyl chloride)	mg/L	0.001 U	0.001 U	0.0014 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
cis-1,2-Dichloroethene	mg/L	0.001 U	0.00084 J	0.00091 J	0.00087 J	0.0015	0.0054	0.0041	0.0006 J	0.00073 J	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
cis-1,3-Dichloropropene	mg/L	0.001 U	0.001 U	0.0014 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Cyclohexane	mg/L	0.001 U	0.001 U	0.0014 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Dibromochloromethane	mg/L	0.001 U	0.001 U	0.0014 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Dichlorodifluoromethane (CFC-12)	mg/L	0.001 U	0.001 U	0.0014 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Ethylbenzene	mg/L	0.001 U	0.001 U	0.0014 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Isopropyl benzene	mg/L	0.001 U	0.001 U	0.0014 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Methyl acetate	mg/L	0.01 U	0.01 U	0.014 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Methyl cyclohexane	mg/L	0.001 U	0.001 U	0.0014 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Methyl tert butyl ether (MTBE)	mg/L	0.001 U	0.005 U	0.0014 U	0.005 U	0.001 U	0.005 U	0.001 U	0.005 U	0.001 U	0.005 U	0.001 U	0.005 U	0.001 U	0.005 U	0.001 U	0.005 U	0.001 U
Methylene chloride	mg/L	0.005 U	0.005 U	0.0072 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Styrene	mg/L	0.001 U	0.001 U	0.0014 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Tetrachloroethene	mg/L	0.001 U	0.001 U	0.0014 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Toluene	mg/L	0.001 U	0.001 U	0.0014 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
trans-1,2-Dichloroethene	mg/L	0.001 U	0.001 U	0.0014 U	0.001 U	0.001 U	0.00038 J	0.00028 J	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
trans-1,3-Dichloropropene	mg/L	0.001 U	0.001 U	0.0014 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Trichloroethene	mg/L	0.001 U	**0.032**[b]	**0.031**[b]	0.00023 J	0.001 U	0.001 U	0.001 U	0.00099 J	0.00087 J	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Trichlorofluoromethane (CFC-11)	mg/L	0.001 U	0.001 U	0.0014 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Trifluorotrichloroethane (Freon 113)	mg/L	0.001 U	0.001 U	0.0014 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Vinyl chloride	mg/L	0.001 U	0.001 U	0.0014 U	0.0012	**0.0029**[b]	0.0019	0.001	0.001 U	0.0003 J	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Xylenes (total)	mg/L	0.002 U	0.002 U	0.0029 U	0.002 U	0.002 U	0.002 U	0.00071 J	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U

TABLE 3.9

PART 201 CRITERIA EXCEEDANCES - GROUNDWATER
2013 RFI REPORT
FORMER GENRERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation		*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*
Aquifier		*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*
Perimeter Status (1)		*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*
Sample Location		*CRA-072M*	*CRA-073M*	*CRA-073M*	*CRA-074M*	*CRA-074M*	*CRA-094M*	*CRA-094M*	*CRA-789M*	*CRA-789M*	*CRA-790M*	*CRA-790M*	*CRA-792M*	*CRA-792M*	*CRA-795M*	*CRA-795M*	*CRA-798M*	*CRA-798M*
Sample Identification (GW-17358-)		*040813-DR-052*	*041612-DR-1022*	*040813-DR-051*	*041612-DR-1023*	*040813-DR-050*	*041212-CB-1007*	*040913-EM-065*	*031312-DR-070*	*040913-JY-066*	*041612-JY-1024*	*040913-JY-060*	*041612-JY-1025*	*040913-JY-058*	*041612-JY-1026*	*040813-DR-049*	*041612-JY-1029*	*040513-JY-036*
Sample Date		*4/8/2013*	*4/16/2012*	*4/8/2013*	*4/16/2012*	*4/8/2013*	*4/12/2012*	*4/9/2013*	*3/13/2012*	*4/9/2013*	*4/16/2012*	*4/9/2013*	*4/16/2012*	*4/9/2013*	*4/16/2012*	*4/8/2013*	*4/16/2012*	*4/5/2013*
Sample Type																		
Semi-Volatile Organic Compounds (SVOCs)																		
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	mg/L	0.0048 U	0.0048 U	0.0051 U	0.0048 U	0.0051 U	0.0053 U	0.0048 U	0.0048 U	0.0051 U	0.0049 U	0.005 U	0.0049 U	0.0054 U	0.005 U	0.005 U	0.0049 U	0.0049 U
2,4,5-Trichlorophenol	mg/L	0.0048 U	0.0048 U	0.0051 U	0.0048 U	0.0051 U	0.0053 U	0.0048 U	0.0048 U	0.0051 U	0.0049 U	0.005 U	0.0049 U	0.0054 U	0.005 U	0.005 U	0.0049 U	0.0049 U
2,4,6-Trichlorophenol	mg/L	0.0038 U	0.0038 U	0.0041 U	0.0038 U	0.0041 U	0.0042 U	0.0038 U	0.0038 U	0.0041 U	0.0039 U	0.004 U	0.0039 U	0.0043 U	0.004 U	0.004 U	0.0039 U	0.0039 U
2,4-Dichlorophenol	mg/L	0.0095 U	0.0095 U	0.01 U	0.0095 U	0.01 U	0.011 U	0.0095 U	0.0095 U	0.01 U	0.0097 U	0.01 U	0.0098 U	0.011 U	0.01 U	0.0099 U	0.0098 U	0.0097 U
2,4-Dimethylphenol	mg/L	0.0048 U	0.0048 U	0.0051 U	0.0048 U	0.0051 U	0.0053 U	0.0048 U	0.0048 U	0.0051 U	0.0049 U	0.005 U	0.0049 U	0.0054 U	0.005 U	0.005 U	0.0049 U	0.0049 U
2,4-Dinitrophenol	mg/L	0.019 U	0.019 U	0.02 U	0.019 U	0.02 U	0.021 U	0.019 U	0.019 U	0.02 U	0.019 U	0.02 U	0.02 U	0.022 U	0.02 U	0.02 U	0.02 U	0.019 U
2,4-Dinitrotoluene	mg/L	0.0048 U	0.0048 U	0.0051 U	0.0048 U	0.0051 U	0.0053 U	0.0048 U	0.0048 U	0.0051 U	0.0049 U	0.005 U	0.0049 U	0.0054 U	0.005 U	0.005 U	0.0049 U	0.0049 U
2,6-Dinitrotoluene	mg/L	0.0048 U	0.0048 U	0.0051 U	0.0048 U	0.0051 U	0.0053 U	0.0048 U	0.0048 U	0.0051 U	0.0049 U	0.005 U	0.0049 U	0.0054 U	0.005 U	0.005 U	0.0049 U	0.0049 U
2-Chloronaphthalene	mg/L	0.0048 U	0.0048 U	0.0051 U	0.0048 U	0.0051 U	0.0053 U	0.0048 U	0.0048 U	0.0051 U	0.0049 U	0.005 U	0.0049 U	0.0054 U	0.005 U	0.005 U	0.0049 U	0.0049 U
2-Chlorophenol	mg/L	0.0048 U	0.0048 U	0.0051 U	0.0048 U	0.0051 U	0.0053 U	0.0048 U	0.0048 U	0.0051 U	0.0049 U	0.005 U	0.0049 U	0.0054 U	0.005 U	0.005 U	0.0049 U	0.0049 U
2-Methylnaphthalene	mg/L	0.0048 U	0.0048 U	0.0051 U	0.0048 U	0.0051 U	0.0053 U	0.0048 U	0.0048 U	0.0051 U	0.0049 U	0.005 U	0.0049 U	0.0054 U	0.005 U	0.005 U	0.0049 U	0.0049 U
2-Methylphenol	mg/L	0.0048 U	0.0048 U	0.0051 U	0.0048 U	0.0051 U	0.0053 U	0.0048 U	0.0048 U	0.0051 U	0.0049 U	0.005 U	0.0049 U	0.0054 U	0.005 U	0.005 U	0.0049 U	0.0049 U
2-Nitroaniline	mg/L	0.019 U	0.019 U	0.02 U	0.019 U	0.02 U	0.021 U	0.019 U	0.019 U	0.02 U	0.019 U	0.02 U	0.02 U	0.022 U	0.02 U	0.02 U	0.02 U	0.019 U
2-Nitrophenol	mg/L	0.0048 U	0.0048 U	0.0051 U	0.0048 U	0.0051 U	0.0053 U	0.0048 U	0.0048 U	0.0051 U	0.0049 U	0.005 U	0.0049 U	0.0054 U	0.005 U	0.005 U	0.0049 U	0.0049 U
3&4-Methylphenol	mg/L	0.0048 U	0.0048 U	0.0051 U	0.0048 U	0.0051 U	0.0053 U	0.0048 U	0.0048 U	0.0051 U	0.0049 U	0.005 U	0.0049 U	0.0054 U	0.005 U	0.005 U	0.0049 U	0.0049 U
3,3'-Dichlorobenzidine	mg/L	0.00095 U	0.00095 U	0.001 U	0.00095 U	0.001 U	0.0011 U	0.00095 U	0.00095 U	0.001 U	0.00097 U	0.001 U	0.00098 U	0.0011 U	0.001 U	0.00099 U	0.00098 U	0.00097 U
3-Nitroaniline	mg/L	0.019 U	0.019 U	0.02 U	0.019 U	0.02 U	0.021 U	0.019 U	0.019 U	0.02 U	0.019 U	0.02 U	0.02 U	0.022 U	0.02 U	0.02 U	0.02 U	0.019 U
4,6-Dinitro-2-methylphenol	mg/L	0.019 U	0.019 U	0.02 U	0.019 U	0.02 U	0.021 U	0.019 U	0.019 U	0.02 U	0.019 U	0.02 U	0.02 U	0.022 U	0.02 U	0.02 U	0.02 U	0.019 U
4-Bromophenyl phenyl ether	mg/L	0.0048 U	0.0048 U	0.0051 U	0.0048 U	0.0051 U	0.0053 U	0.0048 U	0.0048 U	0.0051 U	0.0049 U	0.005 U	0.0049 U	0.0054 U	0.005 U	0.005 U	0.0049 U	0.0049 U
4-Chloro-3-methylphenol	mg/L	0.0048 U	0.0048 U	0.0051 U	0.0048 U	0.0051 U	0.0053 U	0.0048 U	0.0048 U	0.0051 U	0.0049 U	0.005 U	0.0049 U	0.0054 U	0.005 U	0.005 U	0.0049 U	0.0049 U
4-Chloroaniline	mg/L	0.0095 U	0.0095 U	0.01 U	0.0095 U	0.01 U	0.011 U	0.0095 U	0.0095 U	0.01 U	0.0097 U	0.01 U	0.0098 U	0.011 U	0.01 U	0.0099 U	0.0098 U	0.0097 U
4-Chlorophenyl phenyl ether	mg/L	0.0048 U	0.0048 U	0.0051 U	0.0048 U	0.0051 U	0.0053 U	0.0048 U	0.0048 U	0.0051 U	0.0049 U	0.005 U	0.0049 U	0.0054 U	0.005 U	0.005 U	0.0049 U	0.0049 U
4-Nitroaniline	mg/L	0.019 U	0.019 U	0.02 U	0.019 U	0.02 U	0.021 U	0.019 U	0.019 U	0.02 U	0.019 U	0.02 U	0.02 U	0.022 U	0.02 U	0.02 U	0.02 U	0.019 U
4-Nitrophenol	mg/L	0.019 U	0.019 U	0.02 U	0.019 U	0.02 U	0.021 U	0.019 U	0.019 U	0.02 U	0.019 U	0.02 U	0.02 U	0.022 U	0.02 U	0.02 U	0.02 U	0.019 U
Acenaphthene	mg/L	0.0048 U	0.0048 U	0.0051 U	0.0048 U	0.0051 U	0.0053 U	0.0048 U	0.0048 U	0.0051 U	0.0049 U	0.005 U	0.0049 U	0.0054 U	0.005 U	0.005 U	0.0049 U	0.0049 U
Acenaphthylene	mg/L	0.0048 U	0.0048 U	0.0051 U	0.0048 U	0.0051 U	0.0053 U	0.0048 U	0.0048 U	0.0051 U	0.0049 U	0.005 U	0.0049 U	0.0054 U	0.005 U	0.005 U	0.0049 U	0.0049 U
Acetophenone	mg/L	0.0048 U	0.0048 U	0.0051 U	0.0048 U	0.0051 U	0.0053 U	0.0048 U	0.0048 U	0.0051 U	0.0049 U	0.005 U	0.0049 U	0.0054 U	0.005 U	0.005 U	0.0049 U	0.0049 U
Anthracene	mg/L	0.0048 U	0.0048 U	0.0051 U	0.0048 U	0.0051 U	0.0053 U	0.0048 U	0.0048 U	0.0051 U	0.0049 U	0.005 U	0.0049 U	0.0054 U	0.005 U	0.005 U	0.0049 U	0.0049 U
Atrazine	mg/L	0.0029 U	0.0029 U	0.0031 U	0.0029 U	0.0031 U	0.0032 U	0.0029 U	0.0029 U	0.0031 U	0.0029 U	0.003 U	0.0029 U	0.0033 U	0.003 U	0.003 U	0.0029 U	0.0029 U
Benzaldehyde	mg/L	0.0048 U	0.0048 U	0.0051 U	0.0048 U	0.0051 U	0.0053 U	0.0048 U	R	0.0051 U	0.0049 U	0.005 U	0.0049 U	0.0054 U	0.005 U	0.005 U	0.0049 U	0.0049 U
Benzo(a)anthracene	mg/L	0.00095 U	0.00095 U	0.001 U	0.00095 U	0.001 U	0.0011 U	0.00095 U	0.00095 U	0.001 U	0.00097 U	0.001 U	0.00098 U	0.0011 U	0.001 U	0.00099 U	0.00098 U	0.00097 U
Benzo(a)pyrene	mg/L	0.00095 U	0.00095 U	0.001 U	0.00095 U	0.001 U	0.0011 U	0.00095 U	0.00095 U	0.001 U	0.00097 U	0.001 U	0.00098 U	0.0011 U	0.001 U	0.00099 U	0.00098 U	0.00097 U
Benzo(b)fluoranthene	mg/L	0.00095 U	0.00095 U	0.001 U	0.00095 U	0.001 U	0.0011 U	0.00095 U	0.00095 U	0.001 U	0.00097 U	0.001 U	0.00098 U	0.0011 U	0.001 U	0.00099 U	0.00098 U	0.00097 U
Benzo(g,h,i)perylene	mg/L	0.00095 U	0.00095 U	0.001 U	0.00095 U	0.001 U	0.0011 U	0.00095 U	0.00095 U	0.001 U	0.00097 U	0.001 U	0.00098 U	0.0011 U	0.001 U	0.00099 U	0.00098 U	0.00097 U
Benzo(k)fluoranthene	mg/L	0.00095 U	0.00095 U	0.001 U	0.00095 U	0.001 U	0.0011 U	0.00095 U	0.00095 U	0.001 U	0.00097 U	0.001 U	0.00098 U	0.0011 U	0.001 U	0.00099 U	0.00098 U	0.00097 U
Biphenyl (1,1-Biphenyl)	mg/L	0.0048 U	0.0048 U	0.0051 U	0.0048 U	0.0051 U	0.0053 U	0.0048 U	0.0048 U	0.0051 U	0.0049 U	0.005 U	0.0049 U	0.0054 U	0.005 U	0.005 U	0.0049 U	0.0049 U
bis(2-Chloroethoxy)methane	mg/L	0.0048 U	0.0048 U	0.0051 U	0.0048 U	0.0051 U	0.0053 U	0.0048 U	0.0048 U	0.0051 U	0.0049 U	0.005 U	0.0049 U	0.0054 U	0.005 U	0.005 U	0.0049 U	0.0049 U
bis(2-Chloroethyl)ether	mg/L	0.00095 U	0.00095 U	0.001 U	0.00095 U	0.001 U	0.0011 U	0.00095 U	0.00095 U	0.001 U	0.00097 U	0.001 U	0.00098 U	0.0011 U	0.001 U	0.00099 U	0.00098 U	0.00097 U
bis(2-Ethylhexyl)phthalate (DEHP)	mg/L	0.0048 U	0.0048 U	0.0051 U	0.0048 U	0.0051 U	0.0053 U	0.0048 U	0.0048 U	0.0051 U	0.00092 J	0.005 U	0.0049 U	0.0054 U	0.0047 J	0.005 U	0.0049 U	0.0049 U
Butyl benzylphthalate (BBP)	mg/L	0.00083 J	0.0048 U	0.0011 J	0.0048 U	0.00093 J	0.0053 U	0.0048 U	0.0048 U	0.0051 U	0.0049 U	0.005 U	0.0049 U	0.0054 U	0.005 U	0.00096 J	0.0049 U	0.0049 U
Caprolactam	mg/L	0.0095 U	0.0095 U	0.01 U	0.0095 U	0.01 U	0.011 U	0.0095 U	0.0095 U	0.01 U	0.0097 U	0.01 U	0.0098 U	0.011 U	0.01 U	0.0099 U	0.0098 U	0.0097 U
Carbazole	mg/L	0.0095 U	0.0095 U	0.01 U	0.0095 U	0.01 U	0.011 U	0.0095 U	0.0095 U	0.01 U	0.0097 U	0.01 U	0.0098 U	0.011 U	0.01 U	0.0099 U	0.0098 U	0.0097 U
Chrysene	mg/L	0.00095 U	0.00095 U	0.001 U	0.00095 U	0.001 U	0.0011 U	0.00095 U	0.00095 U	0.001 U	0.00097 U	0.001 U	0.00098 U	0.0011 U	0.001 U	0.00099 U	0.00098 U	0.00097 U
Dibenz(a,h)anthracene	mg/L	0.0019 U	0.0019 U	0.002 U	0.0019 U	0.002 U	0.0021 U	0.0019 U	0.0019 U	0.002 U	0.0019 U	0.002 U	0.002 U	0.0022 U	0.002 U	0.002 U	0.002 U	0.0019 U
Dibenzofuran	mg/L	0.0038 U	0.0038 U	0.0041 U	0.0038 U	0.0041 U	0.0042 U	0.0038 U	0.0038 U	0.0041 U	0.0039 U	0.004 U	0.0039 U	0.0043 U	0.004 U	0.004 U	0.0039 U	0.0039 U
Diethyl phthalate	mg/L	0.0048 U	0.0048 U	0.0051 U	0.0048 U	0.0051 U	0.0053 U	0.0048 U	0.0048 U	0.0051 U	0.0049 U	0.005 U	0.0049 U	0.0054 U	0.005 U	0.005 U	0.0049 U	0.0049 U
Dimethyl phthalate	mg/L	0.0048 U	0.0048 U	0.0051 U	0.0048 U	0.0051 U	0.0053 U	0.0048 U	0.0048 U	0.0051 U	0.0049 U	0.005 U	0.0049 U	0.0054 U	0.005 U	0.005 U	0.0049 U	0.0049 U
Di-n-butylphthalate (DBP)	mg/L	0.0048 U	0.0048 U	0.0051 U	0.0048 U	0.0051 U	0.0053 U	0.0048 U	0.0048 U	0.0051 U	0.0049 U	0.005 U	0.0049 U	0.0054 U	0.005 U	0.005 U	0.0049 U	0.0049 U
Di-n-octyl phthalate (DnOP)	mg/L	0.0048 U	0.0048 U	0.0051 U	0.0048 U	0.0051 U	0.0053 U	0.0048 U	0.0048 U	0.0051 U	0.0049 U	0.005 U	0.0049 U	0.0054 U	0.005 U	0.005 U	0.0049 U	0.0049 U
Fluoranthene	mg/L	0.00095 U	0.00095 U	0.001 U	0.00095 U	0.001 U	0.0011 U	0.00095 U	0.00095 U	0.001 U	0.00097 U	0.001 U	0.00098 U	0.0011 U	0.001 U	0.00099 U	0.00098 U	0.00097 U
Fluorene	mg/L	0.0048 U	0.0048 U	0.0051 U	0.0048 U	0.0051 U	0.0053 U	0.0048 U	0.0048 U	0.0051 U	0.0049 U	0.005 U	0.0049 U	0.0054 U	0.005 U	0.005 U	0.0049 U	0.0049 U
Hexachlorobenzene	mg/L	0.00019 U	0.00019 U	0.0002 U	0.00019 U	0.0002 U	0.00021 U	0.00019 U	0.00019 U	0.0002 U	0.00019 U	0.0002 U	0.0002 U	0.00022 U	0.0002 U	0.0002 U	0.0002 U	0.00019 U

TABLE 3.9

PART 201 CRITERIA EXCEEDANCES - GROUNDWATER
2013 RFI REPORT
FORMER GENRERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation		*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*
Aquifier		*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*
Perimeter Status (1)		*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*
Sample Location		*CRA-072M*	*CRA-073M*	*CRA-073M*	*CRA-074M*	*CRA-074M*	*CRA-094M*	*CRA-094M*	*CRA-789M*	*CRA-789M*	*CRA-790M*	*CRA-790M*	*CRA-792M*	*CRA-792M*	*CRA-795M*	*CRA-795M*	*CRA-798M*	*CRA-798M*
Sample Identification (GW-17358-)		*040813-DR-052*	*041612-DR-1022*	*040813-DR-051*	*041612-DR-1023*	*040813-DR-050*	*041212-CB-1007*	*040913-EM-065*	*031312-DR-070*	*040913-JY-066*	*041612-JY-1024*	*040913-JY-060*	*041612-JY-1025*	*040913-JY-058*	*041612-JY-1026*	*040813-DR-049*	*041612-JY-1029*	*040513-JY-036*
Sample Date		*4/8/2013*	*4/16/2012*	*4/8/2013*	*4/16/2012*	*4/8/2013*	*4/12/2012*	*4/9/2013*	*3/13/2012*	*4/9/2013*	*4/16/2012*	*4/9/2013*	*4/16/2012*	*4/9/2013*	*4/16/2012*	*4/8/2013*	*4/16/2012*	*4/5/2013*
Sample Type																		
SVOCs Continued																		
Hexachlorobutadiene	mg/L	0.00095 U	0.00095 U	0.001 U	0.00095 U	0.001 U	0.0011 U	0.00095 U	0.00095 U	0.001 U	0.00097 U	0.001 U	0.00098 U	0.0011 U	0.001 U	0.00099 U	0.00098 U	0.00097 U
Hexachlorocyclopentadiene	mg/L	R	0.0048 U	R	0.0048 U	R	0.0053 U	R	0.0048 U	R	0.0049 U	R	0.0049 U	R	0.005 U	R	0.0049 U	0.0049 U
Hexachloroethane	mg/L	0.0048 U	0.0048 U	0.0051 U	0.0048 U	0.0051 U	0.0053 U	0.0048 U	0.0048 U	0.0051 U	0.0049 U	0.005 U	0.0049 U	0.0054 U	0.005 U	0.005 U	0.0049 U	0.0049 U
Indeno(1,2,3-cd)pyrene	mg/L	0.0019 U	0.0019 U	0.002 U	0.0019 U	0.002 U	0.0021 U	0.0019 U	0.0019 U	0.002 U	0.0019 U	0.002 U	0.002 U	0.0022 U	0.002 U	0.002 U	0.002 U	0.0019 U
Isophorone	mg/L	0.0048 U	0.0048 U	0.0051 U	0.0048 U	0.0051 U	0.0053 U	0.0048 U	0.0048 U	0.0051 U	0.0049 U	0.005 U	0.0049 U	0.0054 U	0.005 U	0.005 U	0.0049 U	0.0049 U
Naphthalene	mg/L	0.0048 U	0.0048 U	0.0051 U	0.0048 U	0.0051 U	0.0053 U	0.0048 U	0.0048 U	0.0051 U	0.0049 U	0.005 U	0.0049 U	0.0054 U	0.005 U	0.005 U	0.0049 U	0.0049 U
Nitrobenzene	mg/L	0.0029 U	0.0029 U	0.0031 U	0.0029 U	0.0031 U	0.0032 U	0.0029 U	0.0029 U	0.0031 U	0.0029 U	0.003 U	0.0029 U	0.0033 U	0.003 U	0.003 U	0.0029 U	0.0029 U
N-Nitrosodi-n-propylamine	mg/L	0.0048 U	0.0048 U	0.0051 U	0.0048 U	0.0051 U	0.0053 U	0.0048 U	0.0048 U	0.0051 U	0.0049 U	0.005 U	0.0049 U	0.0054 U	0.005 U	0.005 U	0.0049 U	0.0049 U
N-Nitrosodiphenylamine	mg/L	0.0048 U	0.0048 U	0.0051 U	0.0048 U	0.0051 U	0.0053 U	0.0048 U	0.0048 U	0.0051 U	0.0049 U	0.005 U	0.0049 U	0.0054 U	0.005 U	0.005 U	0.0049 U	0.0049 U
Pentachlorophenol	mg/L	0.0048 U	0.0048 U	0.0051 U	0.0048 U	0.0051 U	0.0053 U	0.0048 U	0.0048 U	0.0051 U	0.0049 U	0.005 U	0.0049 U	0.0054 U	0.005 U	0.005 U	0.0049 U	0.0049 U
Phenanthrene	mg/L	0.0019 U	0.0019 U	0.002 U	0.0019 U	0.002 U	0.0021 U	0.0019 U	0.0019 U	0.002 U	0.0019 U	0.002 U	0.002 U	0.0022 U	0.002 U	0.002 U	0.002 U	0.0019 U
Phenol	mg/L	0.0048 U	0.0048 U	0.0051 U	0.0048 U	0.0051 U	0.0053 U	0.0048 U	0.0048 U	0.0051 U	0.0049 U	0.005 U	0.0049 U	0.0054 U	0.005 U	0.005 U	0.0049 U	0.0049 U
Pyrene	mg/L	0.0048 U	0.0048 U	0.0051 U	0.0048 U	0.0051 U	0.0053 U	0.0048 U	0.0048 U	0.0051 U	0.0049 U	0.005 U	0.0049 U	0.0054 U	0.005 U	0.005 U	0.0049 U	0.0049 U
Metals																		
Aluminum	mg/L	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	**0.09[b]**	0.022 J	0.05 U	0.02 J	0.022 J	0.019 J	**0.055[b]**	0.05 U	0.02 J	0.024 J	**0.13[b]**	0.023 J
Aluminum (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Antimony	mg/L	0.002 U	0.00019 J	0.002 U	0.00026 J	0.002 U	0.002 U	0.002 U	0.00021 J	0.002 U	0.0002 J	0.002 U	0.0002 J	0.002 U	0.0003 J	0.002 U	0.00024 J	0.002 U
Antimony (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Arsenic	mg/L	0.0027 J	0.00083 J	0.005 U	0.0027 J	0.0022 J	0.01	0.0068	**0.011[bc]**	**0.025[bc]**	0.0055	0.0083	0.0011 J	0.0012 J	0.0028 J	0.0033 J	0.0015 J	0.00079 J
Arsenic (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Barium	mg/L	0.22	0.28	0.23	0.28	0.33	0.16	0.19	0.37	0.32	0.38	0.27	0.18	0.26	0.49	0.27	0.27	0.12
Barium (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Beryllium	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Beryllium (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cadmium	mg/L	0.001 U	0.00035 J	0.00021 J	0.00074 J	0.0016	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.00013 J	0.001 U	0.001 U	0.001 U	0.001 U
Cadmium (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Calcium	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chromium	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.0023 J	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.00071 J	0.0011 J	0.00077 J
Chromium (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chromium III (trivalent)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.01 U	-
Chromium VI (hexavalent)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.01 U	-
Cobalt	mg/L	0.00051 J	0.0013 J	0.0011 J	0.0005 J	0.02 U	0.02 U	0.00015 J	0.0023 J	0.0013 J	0.0012 J	0.00031 J	0.00063 J	0.00074 J	0.0011 J	0.00065 J	0.00087 J	0.00042 J
Cobalt (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Copper	mg/L	0.00085 J	0.004 U	0.0013 J	0.004 U	0.00098 J	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.00081 J	0.004 U	0.0017 J	0.004 U	0.004 U
Copper (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Iron	mg/L	**0.44[b]**	0.2 U	0.2 U	**1.5[b]**	**5.2[b]**	**6.1[b]**	**5.3[b]**	**1.7[b]**	**5.8[b]**	**2.7[b]**	**3[b]**	0.2 U	0.19 J	**1[b]**	**1.3[b]**	**0.71[b]**	0.15 J
Iron (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lead	mg/L	0.003 U	0.00023 J	0.003 U	0.00027 J	0.00044 J	0.003 U	0.003 U	0.00029 J	0.0012 J	0.003 U	0.00037 J	0.003 U	0.00045 J	0.003 U	0.003 U	0.00019 J	0.003 U
Lead (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Magnesium	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Manganese	mg/L	0.047 J	**0.7[b]**	**0.6[b]**	**0.14[b]**	**0.18[b]**	**0.34[b]**	**0.3[b]**	**0.41[b]**	**0.29[b]**	**0.35[b]**	**0.19[b]**	**0.19[b]**	**0.22[b]**	**0.41[b]**	**0.32[b]**	**0.59[b]**	**0.28[b]**
Manganese (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mercury	mg/L	0.0002 U	0.04 U	0.0002 U	0.04 U	0.0002 U	0.04 U	0.0002 U	0.04 U	0.0002 U	0.04 U	0.0002 U	0.04 U	0.0002 U	0.04 U	0.0002 U	0.04 U	0.0002 U
Mercury (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nickel	mg/L	0.0024 J	0.0038 J	0.0022 J	0.0057 J	0.0038 J	0.0047 J	0.0029 J	0.0073 J	0.0035 J	0.0029 J	0.0015 J	0.0021 J	0.0014 J	0.0024 J	0.0015 J	0.0026 J	0.0016 J
Nickel (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Potassium	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Selenium	mg/L	0.0018 J	0.00095 J	0.0012 J	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.0015 J	0.0018 J	0.005 U	0.005 U	0.005 U	0.005 U	0.0024 J	0.0027 J
Selenium (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Silver	mg/L	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Silver (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sodium	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

TABLE 3.9

PART 201 CRITERIA EXCEEDANCES - GROUNDWATER
2013 RFI REPORT
FORMER GENRERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation		*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*
Aquifier		*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*
Perimeter Status (1)		*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*
Sample Location		*CRA-072M*	*CRA-073M*	*CRA-073M*	*CRA-074M*	*CRA-074M*	*CRA-094M*	*CRA-094M*	*CRA-789M*	*CRA-789M*	*CRA-790M*	*CRA-790M*	*CRA-792M*	*CRA-792M*	*CRA-795M*	*CRA-795M*	*CRA-798M*	*CRA-798M*
Sample Identification (GW-17358-)		*040813-DR-052*	*041612-DR-1022*	*040813-DR-051*	*041612-DR-1023*	*040813-DR-050*	*041212-CB-1007*	*040913-EM-065*	*031312-DR-070*	*040913-JY-066*	*041612-JY-1024*	*040913-JY-060*	*041612-JY-1025*	*040913-JY-058*	*041612-JY-1026*	*040813-DR-049*	*041612-JY-1029*	*040513-JY-036*
Sample Date		*4/8/2013*	*4/16/2012*	*4/8/2013*	*4/16/2012*	*4/8/2013*	*4/12/2012*	*4/9/2013*	*3/13/2012*	*4/9/2013*	*4/16/2012*	*4/9/2013*	*4/16/2012*	*4/9/2013*	*4/16/2012*	*4/8/2013*	*4/16/2012*	*4/5/2013*
Sample Type																		
Metals Continued																		
Thallium	mg/L	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.00086 J	0.002 U	0.001 J	0.002 U	0.002 U	0.002 U	0.002 U
Thallium (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Vanadium	mg/L	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.00095 J	0.00062 J	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.00083 J	0.004 U
Vanadium (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Zinc	mg/L	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.0028 J	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Zinc (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Polychlorinated Biphenyls (PCBs)																		
Aroclor-1016 (PCB-1016)	mg/L	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.00011 U	0.000099 U	0.000095 U	0.000097 U	0.000099 U	0.000099 U	0.000095 U	0.000099 U	0.000095 U	0.0001 U	0.0001 U	0.0001 U	0.000096 U
Aroclor-1221 (PCB-1221)	mg/L	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.00011 U	0.000099 U	0.000095 U	0.000097 U	0.000099 U	0.000099 U	0.000095 U	0.000099 U	0.000095 U	0.0001 U	0.0001 U	0.0001 U	0.000096 U
Aroclor-1232 (PCB-1232)	mg/L	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.00011 U	0.000099 U	0.000095 U	0.000097 U	0.000099 U	0.000099 U	0.000095 U	0.000099 U	0.000095 U	0.0001 U	0.0001 U	0.0001 U	0.000096 U
Aroclor-1242 (PCB-1242)	mg/L	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.00011 U	0.000099 U	0.000095 U	0.000097 U	0.000099 U	0.000099 U	0.000095 U	0.000099 U	0.000095 U	0.0001 U	0.0001 U	0.0001 U	0.000096 U
Aroclor-1248 (PCB-1248)	mg/L	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.00011 U	0.000099 U	0.000095 U	0.000097 U	0.000099 U	0.000099 U	0.000095 U	0.000099 U	0.000095 U	0.0001 U	0.0001 U	0.0001 U	0.000096 U
Aroclor-1254 (PCB-1254)	mg/L	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.00011 U	0.000099 U	0.000095 U	0.000097 U	0.000099 U	0.000099 U	0.000095 U	0.000099 U	0.000095 U	0.0001 U	0.0001 U	0.0001 U	0.000096 U
Aroclor-1260 (PCB-1260)	mg/L	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.00011 U	0.000099 UJ	0.000095 U	0.000097 U	0.000099 U	0.000099 U	0.000095 U	0.000099 U	0.000095 U	0.0001 U	0.0001 U	0.0001 U	0.000096 U
Aroclor-1262 (PCB-1262)	mg/L	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.00011 U	0.000099 U	0.000095 U	-	0.000099 U	0.000099 U	0.000095 U	0.000099 U	0.000095 U	0.0001 U	0.0001 U	0.0001 U	0.000096 U
Aroclor-1268 (PCB-1268)	mg/L	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.00011 U	0.000099 U	0.000095 U	-	0.000099 U	0.000099 U	0.000095 U	0.000099 U	0.000095 U	0.0001 U	0.0001 U	0.0001 U	0.000096 U
Total PCBs	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
General Chemistry																		
Cyanide (amenable)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Phosphorus	mg/L	0.1 U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Field Parameters																		
Turbidity, field	NTU	0.65	3.58	0.93	3.17	2.3	4.62	2.09	3.03	1.07	2.21	1.73	2.77	1.53	1.69	0.63	8.01	1.48

Notes
Michigan Part 201 generic clean up criteria (updated September 28, 2012)
ID - Insufficient data to develop criterion
NLV - Hazardous substance is not likely to volatilize under most conditions
NA - Criterion or value is not available

Perimeter Status (1) - N - non-perimeter, Y - perimeter
mg/L - miligram per liter
NTU - Nephelometric Turbidity Unit

Notes:
U - Not detected at the associated reporting limit.
J - Estimated concentration.
UJ - Not detected; associated reporting limit is estimated.

TABLE 3.9

PART 201 CRITERIA EXCEEDANCES - GROUNDWATER
2013 RFI REPORT
FORMER GENRERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation		*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL02*	*CENTRAL02*	*CENTRAL02*	*CENTRAL02*	*CENTRAL02*	*CENTRAL02*
Aquifier		*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*
Perimeter Status (1)		*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*
Sample Location		*CRA-799M*	*CRA-799M*	*CRA-800M*	*CRA-800M*	*CRA-801M*	*CRA-801M*	*CRA-801M*	*CRA-803M*	*CRA-803M*	*CRA-804M*	*CRA-804M*	*CRA-060M*	*CRA-060M*	*CRA-103M*	*CRA-103M*	*CRA-109M*	*CRA-109M*
Sample Identification (GW-17358-)		*041612-DR-1028*	*040513-JY-037*	*041612-DR-1027*	*040513-DR-041*	*041612-DR-1030*	*040513-DR-039*	*040513-DR-040*	*041612-CB-1018*	*040913-EM-064*	*041212-CB-1005*	*040913-EM-063*	*042012-DR-1072*	*040513-CT-035*	*041312-DR-1010*	*041113-EM-092*	*041312-DR-1011*	*041613-DR-108*
Sample Date		*4/16/2012*	*4/5/2013*	*4/16/2012*	*4/5/2013*	*4/16/2012*	*4/5/2013*	*4/5/2013*	*4/16/2012*	*4/9/2013*	*4/12/2012*	*4/9/2013*	*4/20/2012*	*4/5/2013*	*4/13/2012*	*4/11/2013*	*4/13/2012*	*4/16/2013*
Sample Type								*Duplicate*										
Volatile Organic Compounds (VOCs)	***Units***																	
1,1,1-Trichloroethane	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0017 U	0.005 U	0.002 U	0.0017 U	0.001 U	0.001 U	0.0033 U	0.001 U
1,1,2,2-Tetrachloroethane	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0017 U	0.005 U	0.002 U	0.0017 U	0.001 U	0.001 U	0.0033 U	0.001 U
1,1,2-Trichloroethane	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0017 U	0.005 U	0.002 U	0.0017 U	0.001 U	0.001 U	0.0033 U	0.001 U
1,1-Dichloroethane	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.00031 J	0.00021 J	0.0017 U	0.005 U	0.002 U	0.0017 U	0.001 U	0.001 U	0.0033 U	0.001 U
1,1-Dichloroethene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.00032 J	0.005 U	0.002 U	0.0017 U	0.001 U	0.001 U	0.0033 U	0.001 U
1,2,4-Trichlorobenzene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0017 U	0.005 U	0.002 U	0.0017 U	0.001 U	0.001 U	0.0033 U	0.001 U
1,2-Dibromo-3-chloropropane (DBCP)	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0017 U	0.005 U	0.002 U	0.0017 U	0.001 U	0.001 U	0.0033 U	0.001 U
1,2-Dibromoethane (Ethylene dibromide)	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0017 U	0.005 U	0.002 U	0.0017 U	0.001 U	0.001 U	0.0033 U	0.001 U
1,2-Dichlorobenzene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0017 U	0.005 U	0.002 U	0.0017 U	0.001 U	0.001 U	0.0033 U	0.001 U
1,2-Dichloroethane	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0017 U	0.005 U	0.002 U	0.0017 U	0.001 U	0.001 U	0.0033 U	0.001 U
1,2-Dichloropropane	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0017 U	0.005 U	0.002 U	0.0017 U	0.001 U	0.001 U	0.0033 U	0.001 U
1,3-Dichlorobenzene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0017 U	0.005 U	0.002 U	0.0017 U	0.001 U	0.001 U	0.0033 U	0.001 U
1,4-Dichlorobenzene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0017 U	0.005 U	0.002 U	0.0017 U	0.001 U	0.001 U	0.0033 U	0.001 U
2-Butanone (Methyl ethyl ketone) (MEK)	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.017 U	0.05 U	0.02 U	0.017 U	0.01 U	0.01 U	0.033 U	0.01 U
2-Hexanone	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.017 U	0.05 U	0.02 U	0.017 U	0.01 U	0.01 U	0.033 U	0.01 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.017 U	0.05 U	0.02 U	0.017 U	0.01 U	0.01 U	0.033 U	0.01 U
Acetone	mg/L	0.01 UJ	0.01 UJ	0.01 UJ	0.01 UJ	0.01 UJ	0.01 UJ	0.01 UJ	0.01 UJ	0.01 U	0.017 U	0.05 U	0.02 U	0.017 U	0.01 U	0.01 U	0.033 U	0.01 U
Benzene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0017 U	0.005 U	0.002 U	0.0017 U	0.001 U	0.001 U	0.0033 U	0.001 U
Bromodichloromethane	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0017 U	0.005 U	0.002 U	0.0017 U	0.001 U	0.001 U	0.0033 U	0.001 U
Bromoform	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0017 U	0.005 U	0.002 U	0.0017 U	0.001 U	0.001 U	0.0033 U	0.001 U
Bromomethane (Methyl bromide)	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0017 U	0.005 U	0.002 U	0.0017 U	0.001 U	0.001 U	0.0033 U	0.001 U
Carbon disulfide	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.0083 U	0.025 U	0.01 U	0.0083 U	0.005 U	0.005 U	0.017 U	0.005 U
Carbon tetrachloride	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0017 U	0.005 U	0.002 U	0.0017 U	0.001 U	0.001 U	0.0033 U	0.001 U
Chlorobenzene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0017 U	0.005 U	0.002 U	0.0017 U	0.001 U	0.001 U	0.0033 U	0.001 U
Chloroethane	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0017 U	0.005 U	0.002 U	0.0017 U	0.001 U	0.001 U	0.0033 U	0.001 U
Chloroform (Trichloromethane)	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0017 U	0.005 U	0.002 U	0.0017 U	0.001 U	0.001 U	0.0033 U	0.001 U
Chloromethane (Methyl chloride)	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0017 U	0.005 U	0.002 U	0.0017 U	0.001 U	0.001 U	0.0033 U	0.001 U
cis-1,2-Dichloroethene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.00022 J	0.001 U	0.00055 J	0.00054 J	**0.1**[b]	**0.11**[b]	0.0053	0.0057	0.001 U	0.001 U	0.0033 U	0.001 U
cis-1,3-Dichloropropene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0017 U	0.005 U	0.002 U	0.0017 U	0.001 U	0.001 U	0.0033 U	0.001 U
Cyclohexane	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0017 U	0.005 U	0.002 U	0.0017 U	0.001 U	0.001 U	0.0033 U	0.001 U
Dibromochloromethane	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0017 U	0.005 U	0.002 U	0.0017 U	0.001 U	0.001 U	0.0033 U	0.001 U
Dichlorodifluoromethane (CFC-12)	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0017 U	0.005 U	0.002 U	0.0017 U	0.001 U	0.001 U	0.0033 U	0.001 U
Ethylbenzene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0017 U	0.005 U	0.002 U	0.0017 U	0.001 U	0.001 U	0.0033 U	0.001 U
Isopropyl benzene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0017 U	0.005 U	0.002 U	0.0017 U	0.001 U	0.001 U	0.0033 U	0.001 U
Methyl acetate	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.017 U	0.05 U	0.02 U	0.017 U	0.01 U	0.01 U	0.033 U	0.01 U
Methyl cyclohexane	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0017 U	0.005 U	0.00099 J	0.0017 U	0.001 U	0.001 U	0.0033 U	0.001 U
Methyl tert butyl ether (MTBE)	mg/L	0.005 U	0.001 U	0.005 U	0.001 U	0.005 U	0.001 U	0.001 U	0.005 U	0.001 U	0.0083 U	0.005 U	0.01 U	0.0017 U	0.005 U	0.001 U	0.017 U	0.001 U
Methylene chloride	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.0083 U	0.025 U	0.01 U	0.0083 U	0.005 U	0.005 U	0.017 U	0.005 U
Styrene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0017 U	0.005 U	0.002 U	0.0017 U	0.001 U	0.001 U	0.0033 U	0.001 U
Tetrachloroethene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0017 U	0.005 U	0.002 U	0.0017 U	0.001 U	0.001 U	0.0033 U	0.001 U
Toluene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0017 U	0.005 U	0.00037 J	0.0017 U	0.001 U	0.001 U	0.00079 J	0.00068 J
trans-1,2-Dichloroethene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.062	0.068	0.00089 J	0.0011 J	0.00029 J	0.001 U	0.0033 U	0.001 U
trans-1,3-Dichloropropene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0017 U	0.005 U	0.002 U	0.0017 U	0.001 U	0.001 U	0.0033 U	0.001 U
Trichloroethene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	**0.0096**[b]	0.0029 J	**0.059**[b]	**0.047**[b]	0.001 U	0.001 U	0.0033 U	0.001 U
Trichlorofluoromethane (CFC-11)	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0017 U	0.005 U	0.002 U	0.0017 U	0.001 U	0.001 U	0.0033 U	0.001 U
Trifluorotrichloroethane (Freon 113)	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0017 U	0.005 U	0.002 U	0.0017 U	0.001 U	0.001 U	0.0033 U	0.001 U
Vinyl chloride	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0017 U	0.005 U	**0.0021**[b]	**0.003**[b]	0.00061 J	0.001 U	**0.07**[bc]	**0.0035**[b]
Xylenes (total)	mg/L	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.00073 J	0.0033 U	0.01 U	0.004 U	0.0033 U	0.002 U	0.002 U	0.0067 U	0.002 U

TABLE 3.9

PART 201 CRITERIA EXCEEDANCES - GROUNDWATER
2013 RFI REPORT
FORMER GENRERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation		*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL02*	*CENTRAL02*	*CENTRAL02*	*CENTRAL02*	*CENTRAL02*	*CENTRAL02*
Aquifier		*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*
Perimeter Status (1)		*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*
Sample Location		*CRA-799M*	*CRA-799M*	*CRA-800M*	*CRA-800M*	*CRA-801M*	*CRA-801M*	*CRA-801M*	*CRA-803M*	*CRA-803M*	*CRA-804M*	*CRA-804M*	*CRA-060M*	*CRA-060M*	*CRA-103M*	*CRA-103M*	*CRA-109M*	*CRA-109M*
Sample Identification (GW-17358-)		*041612-DR-1028*	*040513-JY-037*	*041612-DR-1027*	*040513-DR-041*	*041612-DR-1030*	*040513-DR-039*	*040513-DR-040*	*041612-CB-1018*	*040913-EM-064*	*041212-CB-1005*	*040913-EM-063*	*042012-DR-1072*	*040513-CT-035*	*041312-DR-1010*	*041113-EM-092*	*041312-DR-1011*	*041613-DR-108*
Sample Date		*4/16/2012*	*4/5/2013*	*4/16/2012*	*4/5/2013*	*4/16/2012*	*4/5/2013*	*4/5/2013*	*4/16/2012*	*4/9/2013*	*4/12/2012*	*4/9/2013*	*4/20/2012*	*4/5/2013*	*4/13/2012*	*4/11/2013*	*4/13/2012*	*4/16/2013*
Sample Type								*Duplicate*										
Semi-Volatile Organic Compounds (SVOCs)																		
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	mg/L	0.005 U	0.0048 U	0.0051 U	0.0054 U	0.0049 U	0.0052 U	0.0055 U	0.005 U	0.0048 U	0.005 U	0.0049 U	0.005 U	0.005 U	0.0051 U	0.0049 U	0.025 U	0.0048 U
2,4,5-Trichlorophenol	mg/L	0.005 U	0.0048 U	0.0051 U	0.0054 U	0.0049 U	0.0052 U	0.0055 U	0.005 U	0.0048 U	0.005 U	0.0049 U	0.005 U	0.005 U	0.0051 U	0.0049 U	0.025 U	0.0048 U
2,4,6-Trichlorophenol	mg/L	0.004 U	0.0038 U	0.004 U	0.0043 U	0.0039 U	0.0042 U	0.0044 U	0.004 U	0.0038 U	0.004 U	0.0039 U	0.004 U	0.004 U	0.004 U	0.0039 U	0.02 U	0.0038 U
2,4-Dichlorophenol	mg/L	0.0099 U	0.0095 U	0.01 U	0.011 U	0.0097 U	0.01 U	0.011 U	0.01 U	0.0096 U	0.01 U	0.0098 U	0.01 U	0.01 U	0.01 U	0.0097 U	0.05 U	0.0095 U
2,4-Dimethylphenol	mg/L	0.005 U	0.0048 U	0.0051 U	0.0054 U	0.0049 U	0.0052 U	0.0055 U	0.005 U	0.0048 U	0.005 U	0.0049 U	0.005 U	0.005 U	0.0051 U	0.0049 U	0.025 U	0.0048 U
2,4-Dinitrophenol	mg/L	0.02 U	0.019 U	0.02 U	0.022 U	0.019 U	0.021 U	0.022 U	0.02 U	0.019 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.019 U	0.1 U	0.019 U
2,4-Dinitrotoluene	mg/L	0.005 U	0.0048 U	0.0051 U	0.0054 U	0.0049 U	0.0052 U	0.0055 U	0.005 U	0.0048 U	0.005 U	0.0049 U	0.005 U	0.005 U	0.0051 U	0.0049 U	0.025 U	0.0048 U
2,6-Dinitrotoluene	mg/L	0.005 U	0.0048 U	0.0051 U	0.0054 U	0.0049 U	0.0052 U	0.0055 U	0.005 U	0.0048 U	0.005 U	0.0049 U	0.005 U	0.005 U	0.0051 U	0.0049 U	0.025 U	0.0048 U
2-Chloronaphthalene	mg/L	0.005 U	0.0048 U	0.0051 U	0.0054 U	0.0049 U	0.0052 U	0.0055 U	0.005 U	0.0048 U	0.005 U	0.0049 U	0.005 U	0.005 U	0.0051 U	0.0049 U	0.025 U	0.0048 U
2-Chlorophenol	mg/L	0.005 U	0.0048 U	0.0051 U	0.0054 U	0.0049 U	0.0052 U	0.0055 U	0.005 U	0.0048 U	0.005 U	0.0049 U	0.005 U	0.005 U	0.0051 U	0.0049 U	0.025 U	0.0048 U
2-Methylnaphthalene	mg/L	0.005 U	0.0048 U	0.0051 U	0.00015 J	0.0049 U	0.0052 U	0.0055 U	0.005 U	0.0048 U	0.005 U	0.0049 U	0.005 U	0.005 U	0.0051 U	0.0049 U	0.025 U	0.00022 J
2-Methylphenol	mg/L	0.005 U	0.0048 U	0.0051 U	0.0054 U	0.0049 U	0.0052 U	0.0055 U	0.005 U	0.0048 U	0.005 U	0.0049 U	0.005 U	0.005 U	0.0051 U	0.0049 U	0.025 U	0.0048 U
2-Nitroaniline	mg/L	0.02 U	0.019 U	0.02 U	0.022 U	0.019 U	0.021 U	0.022 U	0.02 U	0.019 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.019 U	0.1 U	0.019 U
2-Nitrophenol	mg/L	0.005 U	0.0048 U	0.0051 U	0.0054 U	0.0049 U	0.0052 U	0.0055 U	0.005 U	0.0048 U	0.005 U	0.0049 U	0.005 U	0.005 U	0.0051 U	0.0049 U	0.025 U	0.0048 U
3&4-Methylphenol	mg/L	0.005 U	0.0048 U	0.0051 U	0.0054 U	0.0049 U	0.0052 U	0.0055 U	0.005 U	0.0048 U	0.005 U	0.0049 U	0.005 U	0.005 U	0.0051 U	0.0049 U	0.025 U	0.0048 U
3,3'-Dichlorobenzidine	mg/L	0.00099 U	0.00095 U	0.001 U	0.0011 U	0.00097 U	0.001 U	0.0011 U	0.001 U	0.00096 U	0.001 U	0.00098 U	0.001 U	0.001 U	R	0.00097 U	0.005 U	R
3-Nitroaniline	mg/L	0.02 U	0.019 U	0.02 U	0.022 U	0.019 U	0.021 U	0.022 U	0.02 U	0.019 U	0.02 U	0.02 U	0.02 U	0.02 U	R	0.019 U	0.1 U	R
4,6-Dinitro-2-methylphenol	mg/L	0.02 U	0.019 U	0.02 U	0.022 U	0.019 U	0.021 U	0.022 U	0.02 U	0.019 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.019 U	0.1 U	0.019 U
4-Bromophenyl phenyl ether	mg/L	0.005 U	0.0048 U	0.0051 U	0.0054 U	0.0049 U	0.0052 U	0.0055 U	0.005 U	0.0048 U	0.005 U	0.0049 U	0.005 U	0.005 U	0.0051 U	0.0049 U	0.025 U	0.0048 U
4-Chloro-3-methylphenol	mg/L	0.005 U	0.0048 U	0.0051 U	0.0054 U	0.0049 U	0.0052 U	0.0055 U	0.005 U	0.0048 U	0.005 U	0.0049 U	0.005 U	0.005 U	0.0051 U	0.0049 U	0.025 U	0.0048 U
4-Chloroaniline	mg/L	0.0099 U	0.0095 U	0.01 U	0.011 U	0.0097 U	0.01 U	0.011 U	0.01 U	0.0096 U	0.01 U	0.0098 U	0.01 U	0.01 U	R	0.0097 U	0.05 U	R
4-Chlorophenyl phenyl ether	mg/L	0.005 U	0.0048 U	0.0051 U	0.0054 U	0.0049 U	0.0052 U	0.0055 U	0.005 U	0.0048 U	0.005 U	0.0049 U	0.005 U	0.005 U	0.0051 U	0.0049 U	0.025 U	0.0048 U
4-Nitroaniline	mg/L	0.02 U	0.019 U	0.02 U	0.022 U	0.019 U	0.021 U	0.022 U	0.02 U	0.019 U	0.02 U	0.02 U	0.02 U	0.02 U	R	0.019 U	0.1 U	R
4-Nitrophenol	mg/L	0.02 U	0.019 U	0.02 U	0.022 U	0.019 U	0.021 U	0.022 U	0.02 U	0.019 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.019 U	0.1 U	0.019 U
Acenaphthene	mg/L	0.005 U	0.0048 U	0.0051 U	0.00036 J	0.0049 U	0.0052 U	0.0055 U	0.005 U	0.0048 U	0.005 U	0.0049 U	0.005 U	0.005 U	0.0051 U	0.0049 U	0.025 U	0.0048 U
Acenaphthylene	mg/L	0.005 U	0.0048 U	0.0051 U	0.0054 U	0.0049 U	0.0052 U	0.0055 U	0.005 U	0.0048 U	0.005 U	0.0049 U	0.005 U	0.005 U	0.0051 U	0.0049 U	0.025 U	0.0048 U
Acetophenone	mg/L	0.005 U	0.0048 U	0.0051 U	0.0054 U	0.0049 U	0.0052 U	0.0055 U	0.005 U	0.0048 U	0.005 U	0.0049 U	0.005 U	0.005 U	0.0051 U	0.0049 U	0.025 U	0.0048 U
Anthracene	mg/L	0.005 U	0.0048 U	0.0051 U	0.0054 U	0.0049 U	0.0052 U	0.0055 U	0.005 U	0.0048 U	0.005 U	0.0049 U	0.005 U	0.005 U	0.0051 U	0.0049 U	0.025 U	0.0048 U
Atrazine	mg/L	0.003 U	0.0029 U	0.003 U	0.0032 U	0.0029 U	0.0031 U	0.0033 U	0.003 U	0.0029 U	0.003 U	0.0029 U	0.003 U	0.003 U	0.003 UJ	0.0029 U	0.015 U	0.0029 UJ
Benzaldehyde	mg/L	0.005 U	0.0048 U	0.0051 U	0.0054 U	0.0049 U	0.0052 U	0.0055 U	0.005 U	0.0048 U	0.005 U	0.0049 U	0.005 U	0.005 U	0.0051 U	0.0049 U	0.025 U	0.0048 U
Benzo(a)anthracene	mg/L	0.00099 U	0.00095 U	0.001 U	0.0011 U	0.00097 U	0.001 U	0.0011 U	0.001 U	0.00096 U	0.001 U	0.00098 U	0.001 U	0.001 U	0.001 UJ	0.00097 U	0.005 U	0.00095 U
Benzo(a)pyrene	mg/L	0.00099 U	0.00095 U	0.001 U	0.0011 U	0.00097 U	0.001 U	0.0011 U	0.001 U	0.00096 U	0.001 U	0.00098 U	0.001 U	0.001 U	0.001 U	0.00097 U	0.005 U	0.00095 U
Benzo(b)fluoranthene	mg/L	0.00099 U	0.00095 U	0.001 U	0.0011 U	0.00097 U	0.001 U	0.0011 U	0.001 U	0.00096 U	0.001 U	0.00098 U	0.001 U	0.001 U	0.001 U	0.00097 U	0.005 U	0.00095 U
Benzo(g,h,i)perylene	mg/L	0.00099 U	0.00095 U	0.001 U	0.0011 U	0.00097 U	0.001 U	0.0011 U	0.001 U	0.00096 U	0.001 U	0.00098 U	0.001 U	0.001 U	0.001 U	0.00097 U	0.005 U	0.00095 U
Benzo(k)fluoranthene	mg/L	0.00099 U	0.00095 U	0.001 U	0.0011 U	0.00097 U	0.001 U	0.0011 U	0.001 U	0.00096 U	0.001 U	0.00098 U	0.001 U	0.001 U	0.001 U	0.00097 U	0.005 U	0.00095 U
Biphenyl (1,1-Biphenyl)	mg/L	0.005 U	0.0048 U	0.0051 U	0.0054 U	0.0049 U	0.0052 U	0.0055 U	0.005 U	0.0048 U	0.005 U	0.0049 U	0.005 U	0.005 U	0.0051 U	0.0049 U	0.025 U	0.0048 U
bis(2-Chloroethoxy)methane	mg/L	0.005 U	0.0048 U	0.0051 U	0.0054 U	0.0049 U	0.0052 U	0.0055 U	0.005 U	0.0048 U	0.005 U	0.0049 U	0.005 U	0.005 U	0.0051 U	0.0049 U	0.025 U	0.0048 U
bis(2-Chloroethyl)ether	mg/L	0.00099 U	0.00095 U	0.001 U	0.0011 U	0.00097 U	0.001 U	0.0011 U	0.001 U	0.00096 U	0.001 U	0.00098 U	0.001 U	0.001 U	0.001 U	0.00097 U	0.005 U	0.00095 U
bis(2-Ethylhexyl)phthalate (DEHP)	mg/L	0.005 U	0.0048 U	0.0051 U	0.0054 U	0.0049 U	0.0052 U	0.0055 U	0.005 U	0.0048 U	0.0014 J	0.0049 U	0.005 U	0.0011 J	0.00092 J	0.00097 J	0.025 U	0.0048 U
Butyl benzylphthalate (BBP)	mg/L	0.005 U	0.0048 U	0.0051 U	0.0054 U	0.0049 U	0.0052 U	0.0055 U	0.005 U	0.0048 U	0.005 U	0.0049 U	0.005 U	0.005 U	0.0051 U	0.0049 U	0.025 U	0.0048 U
Caprolactam	mg/L	0.0099 U	0.0095 U	0.01 U	0.011 U	0.0097 U	0.01 U	0.011 U	0.01 U	0.0096 U	0.01 U	0.0098 U	0.01 U	0.01 U	R	0.0097 U	0.05 U	0.0095 U
Carbazole	mg/L	0.0099 U	0.0095 U	0.01 U	0.011 U	0.0097 U	0.01 U	0.011 U	0.01 U	0.0096 U	0.01 U	0.0098 U	0.01 U	0.01 U	0.01 U	0.0097 U	0.05 U	0.0095 U
Chrysene	mg/L	0.00099 U	0.00095 U	0.001 U	0.0011 U	0.00097 U	0.001 U	0.0011 U	0.001 U	0.00096 U	0.001 U	0.00098 U	0.001 U	0.001 U	0.001 UJ	0.00097 U	0.005 U	0.00095 U
Dibenz(a,h)anthracene	mg/L	0.002 U	0.0019 U	0.002 U	0.0022 U	0.0019 U	0.0021 U	0.0022 U	0.002 U	0.0019 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.0019 U	0.01 U	0.0019 U
Dibenzofuran	mg/L	0.004 U	0.0038 U	0.004 U	0.00022 J	0.0039 U	0.0042 U	0.0044 U	0.004 U	0.0038 U	0.004 U	0.0039 U	0.004 U	0.004 U	0.004 U	0.0039 U	0.02 U	0.0038 U
Diethyl phthalate	mg/L	0.005 U	0.0048 U	0.00097 J	0.0054 U	0.0049 U	0.0052 U	0.0055 U	0.005 U	0.0048 U	0.005 U	0.0049 U	0.005 U	0.005 U	0.0051 U	0.0049 U	0.025 U	0.0048 U
Dimethyl phthalate	mg/L	0.005 U	0.0048 U	0.0051 U	0.0054 U	0.0049 U	0.0052 U	0.0055 U	0.005 U	0.0048 U	0.005 U	0.0049 U	0.005 U	0.005 U	0.0051 U	0.0049 U	0.025 U	0.0048 U
Di-n-butylphthalate (DBP)	mg/L	0.005 U	0.0048 U	0.0051 U	0.0054 U	0.0049 U	0.0052 U	0.0055 U	0.005 U	0.0048 U	0.005 U	0.0049 U	0.005 U	0.005 U	0.0051 U	0.0049 U	0.025 U	0.0048 U
Di-n-octyl phthalate (DnOP)	mg/L	0.005 U	0.0048 U	0.0051 U	0.0054 U	0.0049 U	0.0052 U	0.0055 U	0.005 U	0.0048 U	0.005 U	0.0049 U	0.005 U	0.005 U	0.0051 U	0.0049 U	0.025 U	0.0048 U
Fluoranthene	mg/L	0.00099 U	0.00095 U	0.001 U	0.0011 U	0.00097 U	0.001 U	0.0011 U	0.001 U	0.00096 U	0.001 U	0.00098 U	0.001 U	0.001 U	0.001 U	0.00097 U	0.005 U	0.00095 U
Fluorene	mg/L	0.005 U	0.0048 U	0.0051 U	0.00017 J	0.0049 U	0.0052 U	0.0055 U	0.005 U	0.0048 U	0.005 U	0.0049 U	0.005 U	0.005 U	0.0051 U	0.0049 U	0.025 U	0.00069 J
Hexachlorobenzene	mg/L	0.0002 U	0.00019 U	0.0002 U	0.00022 U	0.00019 U	0.00021 U	0.00022 U	0.0002 U	0.00019 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.00019 U	0.001 U	0.00019 U

TABLE 3.9

PART 201 CRITERIA EXCEEDANCES - GROUNDWATER
2013 RFI REPORT
FORMER GENRERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation		*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL02*	*CENTRAL02*	*CENTRAL02*	*CENTRAL02*	*CENTRAL02*	*CENTRAL02*
Aquifer		*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*
Perimeter Status (1)		*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*
Sample Location		*CRA-799M*	*CRA-799M*	*CRA-800M*	*CRA-800M*	*CRA-801M*	*CRA-801M*	*CRA-801M*	*CRA-803M*	*CRA-803M*	*CRA-804M*	*CRA-804M*	*CRA-060M*	*CRA-060M*	*CRA-103M*	*CRA-103M*	*CRA-109M*	*CRA-109M*
Sample Identification (GW-17358-)		*041612-DR-1028*	*040513-JY-037*	*041612-DR-1027*	*040513-DR-041*	*041612-DR-1030*	*040513-DR-039*	*040513-DR-040*	*041612-CB-1018*	*040913-EM-064*	*041212-CB-1005*	*040913-EM-063*	*042012-DR-1072*	*040513-CT-035*	*041312-DR-1010*	*041113-EM-092*	*041312-DR-1011*	*041613-DR-108*
Sample Date		*4/16/2012*	*4/5/2013*	*4/16/2012*	*4/5/2013*	*4/16/2012*	*4/5/2013*	*4/5/2013*	*4/16/2012*	*4/9/2013*	*4/12/2012*	*4/9/2013*	*4/20/2012*	*4/5/2013*	*4/13/2012*	*4/11/2013*	*4/13/2012*	*4/16/2013*
Sample Type								*Duplicate*										
SVOCs Continued																		
Hexachlorobutadiene	mg/L	0.00099 U	0.00095 U	0.001 U	0.0011 U	0.00097 U	0.001 U	0.0011 U	0.001 U	0.00096 U	0.001 U	0.00098 U	0.001 U	0.001 U	0.001 U	0.00097 U	0.005 U	0.00095 U
Hexachlorocyclopentadiene	mg/L	0.005 U	0.0048 U	0.0051 U	0.0054 U	0.0049 U	0.0052 U	0.0055 U	0.005 U	R	0.005 U	R	0.005 U	0.005 U	0.0051 U	0.0049 U	0.025 U	R
Hexachloroethane	mg/L	0.005 U	0.0048 U	0.0051 U	0.0054 U	0.0049 U	0.0052 U	0.0055 U	0.005 U	0.0048 U	0.005 U	0.0049 U	0.005 U	0.005 U	0.0051 U	0.0049 U	0.025 U	0.0048 U
Indeno(1,2,3-cd)pyrene	mg/L	0.002 U	0.0019 U	0.002 U	0.0022 U	0.0019 U	0.0021 U	0.0022 U	0.002 U	0.0019 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.0019 U	0.01 U	0.0019 U
Isophorone	mg/L	0.005 U	0.0048 U	0.0051 U	0.0054 U	0.0049 U	0.0052 U	0.0055 U	0.005 U	0.0048 U	0.005 U	0.0049 U	0.005 U	0.005 U	0.0051 U	0.0049 U	0.025 U	0.0048 U
Naphthalene	mg/L	0.005 U	0.0048 U	0.00042 J	0.00035 J	0.0049 U	0.0052 U	0.0055 U	0.005 U	0.0048 U	0.005 U	0.0049 U	0.00017 J	0.005 U	0.0051 U	0.0049 U	0.025 U	0.00028 J
Nitrobenzene	mg/L	0.003 U	0.0029 U	0.003 U	0.0032 U	0.0029 U	0.0031 U	0.0033 U	0.003 U	0.0029 U	0.003 U	0.0029 U	0.003 U	0.003 U	0.003 U	0.0029 U	0.015 U	0.0029 U
N-Nitrosodi-n-propylamine	mg/L	0.005 U	0.0048 U	0.0051 U	0.0054 U	0.0049 U	0.0052 U	0.0055 U	0.005 U	0.0048 U	0.005 U	0.0049 U	0.005 U	0.005 U	0.0051 U	0.0049 U	0.025 U	0.0048 U
N-Nitrosodiphenylamine	mg/L	0.005 U	0.0048 U	0.0051 U	0.0054 U	0.0049 U	0.0052 U	0.0055 U	0.005 U	0.0048 U	0.005 U	0.0049 U	0.005 U	0.005 U	0.0051 U	0.0049 U	0.025 U	0.0048 U
Pentachlorophenol	mg/L	0.005 U	0.0048 U	0.0051 U	0.0054 U	0.0049 U	0.0052 U	0.0055 U	0.005 U	0.0048 U	0.005 U	0.0049 U	0.005 U	0.005 U	0.0051 U	0.0049 U	0.025 U	0.0048 U
Phenanthrene	mg/L	0.002 U	0.0019 U	0.002 U	0.0022 U	0.0019 U	0.0021 U	0.0022 U	0.002 U	0.0019 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.0019 U	0.0018 J	0.0019
Phenol	mg/L	0.005 U	0.0048 U	0.0051 U	0.0054 U	0.0049 U	0.0052 U	0.0055 U	0.005 U	0.0048 U	0.005 U	0.0049 U	0.005 U	0.005 U	0.0051 U	0.0049 U	0.025 U	0.0048 U
Pyrene	mg/L	0.005 U	0.0048 U	0.0051 U	0.0054 U	0.0049 U	0.0052 U	0.0055 U	0.005 U	0.0048 U	0.005 U	0.0049 U	0.005 U	0.005 U	0.0051 U	0.0049 U	0.025 U	0.0048 U
Metals																		
Aluminum	mg/L	**0.16**[b]	**0.057**[b]	**0.095**[b]	0.043 J	0.029 J	0.037 J	0.031 J	0.049 J	0.05 U	0.039 J	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.02 J	0.0077 J
Aluminum (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Antimony	mg/L	0.00022 J	0.002 U	0.00016 J	0.002 U	0.00024 J	0.002 U	0.002 U	0.00015 J	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.00023 J	0.002 U	0.002 U	0.002 U
Antimony (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Arsenic	mg/L	0.00098 J	0.00091 J	0.003 J	0.0026 J	0.0011 J	0.001 J	0.0011 J	0.0027 J	0.0019 J	0.0082	0.0077	0.0021 J	0.00085 J	0.0051	0.0042 J	**0.044**[bc]	**0.027**[bc]
Arsenic (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Barium	mg/L	0.17	0.056 J	0.23	0.11	0.13	0.13	0.14	0.22	0.26	0.18	0.2	0.052 J	0.049 J	0.21	0.18	0.16	0.18
Barium (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Beryllium	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.00016 J
Beryllium (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cadmium	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.00021 J	0.001 U	0.001 U	0.001 U	0.001 U	0.00014 J
Cadmium (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Calcium	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chromium	mg/L	0.01 U	0.0012 J	0.01 U	0.0011 J	0.01 U	0.0013 J	0.001 J	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.00083 J	0.01 U	0.01 U	0.01 U	0.01 U
Chromium (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chromium III (trivalent)	mg/L	-	-	-	-	0.01 U	-	-	-	-	0.01 U	-	-	-	-	-	-	-
Chromium VI (hexavalent)	mg/L	-	-	-	-	0.01 U	-	-	-	-	0.01 U	-	-	-	-	-	-	-
Cobalt	mg/L	0.0015 J	0.00043 J	0.0017 J	0.00058 J	0.00083 J	0.00084 J	0.00088 J	0.00096 J	0.00099 J	0.0009 J	0.00039 J	0.0038 J	0.003 J	0.00054 J	0.00051 J	0.0019 J	0.0015 J
Cobalt (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Copper	mg/L	0.004 U	0.002 J	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.0044	0.0029 J	0.004 U	0.004 U	0.004 U	0.004 U
Copper (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Iron	mg/L	0.075 J	0.029 J	**0.58**[b]	**0.72**[b]	0.2 U	0.035 J	0.2 U	**0.5**[b]	**0.4**[b]	**3.6**[b]	**3.7**[b]	**0.49**[b]	0.2 U	**11**[b]	**12**[b]	**15**[b]	**14**[b]
Iron (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lead	mg/L	0.00023 J	0.003 U	0.00035 J	0.003 U	0.003 U	0.00025 J	0.003 U	0.003 U	0.003 U	0.003 U	0.00039 J	0.00073 J	0.0003 J	0.00018 J	0.003 U	0.0005 J	0.00034 J
Lead (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Magnesium	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Manganese	mg/L	**0.26**[b]	**0.074**[b]	**0.77**[b]	**0.34**[b]	**0.4**[b]	**0.55**[b]	**0.57**[b]	**0.38**[b]	**0.42**[b]	**0.66**[b]	**0.74**[b]	**1.5**[b]	**0.61**[b]	**0.22**[b]	**0.21**[b]	**0.13**[b]	**0.14**[b]
Manganese (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mercury	mg/L	0.04 U	0.0002 U	0.04 U	0.0002 U	0.04 U	0.0002 U	0.0002 U	0.04 U	0.0002 U	0.04 U	0.0002 U	0.04 U	0.0002 U	0.04 U	0.0002 U	0.04 U	0.0002 U
Mercury (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nickel	mg/L	0.003 J	0.0019 J	0.0028 J	0.0017 J	0.0017 J	0.0018 J	0.0018 J	0.0028 J	0.0024 J	0.012 J	0.0078 J	0.015 J	0.013 J	0.028	0.042	0.032	0.027
Nickel (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Potassium	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Selenium	mg/L	0.0034 J	0.005	0.005 U	0.00093 J	0.0026 J	0.002 J	0.0018 J	0.005 U	0.005 U	0.00076 J	0.005 U	0.0009 J	0.00059 J	0.005 U	0.005 U	0.005 U	0.00047 J
Selenium (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Silver	mg/L	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.000013 J
Silver (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sodium	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

TABLE 3.9

PART 201 CRITERIA EXCEEDANCES - GROUNDWATER
2013 RFI REPORT
FORMER GENRERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation		*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL02*	*CENTRAL02*	*CENTRAL02*	*CENTRAL02*	*CENTRAL02*	*CENTRAL02*
Aquifier		*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*
Perimeter Status (1)		*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*
Sample Location		*CRA-799M*	*CRA-799M*	*CRA-800M*	*CRA-800M*	*CRA-801M*	*CRA-801M*	*CRA-801M*	*CRA-803M*	*CRA-803M*	*CRA-804M*	*CRA-804M*	*CRA-060M*	*CRA-060M*	*CRA-103M*	*CRA-103M*	*CRA-109M*	*CRA-109M*
Sample Identification (GW-17358-)		*041612-DR-1028*	*040513-JY-037*	*041612-DR-1027*	*040513-DR-041*	*041612-DR-1030*	*040513-DR-039*	*040513-DR-040*	*041612-CB-1018*	*040913-EM-064*	*041212-CB-1005*	*040913-EM-063*	*042012-DR-1072*	*040513-CT-035*	*041312-DR-1010*	*041113-EM-092*	*041312-DR-1011*	*041613-DR-108*
Sample Date		*4/16/2012*	*4/5/2013*	*4/16/2012*	*4/5/2013*	*4/16/2012*	*4/5/2013*	*4/5/2013*	*4/16/2012*	*4/9/2013*	*4/12/2012*	*4/9/2013*	*4/20/2012*	*4/5/2013*	*4/13/2012*	*4/11/2013*	*4/13/2012*	*4/16/2013*
Sample Type								*Duplicate*										
Metals Continued																		
Thallium	mg/L	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.00018 J	0.002 U	0.00028 J	0.00041 J	0.00014 J	0.002 U	0.002 U	0.00015 J	0.0011 J
Thallium (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Vanadium	mg/L	0.00087 J	0.00099 J	0.004 U	0.004 U	0.00047 J	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.001 J	0.0011 J
Vanadium (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Zinc	mg/L	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.019 J	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Zinc (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Polychlorinated Biphenyls (PCBs)																		
Aroclor-1016 (PCB-1016)	mg/L	0.000095 U	0.000096 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.000097 U	0.000095 U	0.000095 U	0.000095 U	0.0001 U	0.000095 U	0.0001 U	0.0001 U	0.0001 U	0.000095 U
Aroclor-1221 (PCB-1221)	mg/L	0.000095 U	0.000096 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.000097 U	0.000095 U	0.000095 U	0.000095 U	0.0001 U	0.000095 U	0.0001 U	0.0001 U	0.0001 U	0.000095 U
Aroclor-1232 (PCB-1232)	mg/L	0.000095 U	0.000096 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.000097 U	0.000095 U	0.000095 U	0.000095 U	0.0001 U	0.000095 U	0.0001 U	0.0001 U	0.0001 U	0.000095 U
Aroclor-1242 (PCB-1242)	mg/L	0.000095 U	0.000096 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.000097 U	0.000095 U	0.000095 U	0.000095 U	0.0001 U	0.000095 U	0.0001 U	0.0001 U	0.0001 U	0.000095 U
Aroclor-1248 (PCB-1248)	mg/L	0.000095 U	0.000096 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.000097 U	0.000095 U	0.000095 U	0.000095 U	0.0001 U	0.000095 U	0.0001 U	0.0001 U	0.0001 U	0.000095 U
Aroclor-1254 (PCB-1254)	mg/L	0.000095 U	0.000096 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.000097 U	0.000095 U	0.000095 U	0.000095 U	0.0001 U	0.000095 U	0.0001 U	0.0001 U	0.0001 U	0.000095 U
Aroclor-1260 (PCB-1260)	mg/L	0.000095 U	0.000096 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.000097 U	0.000095 U	0.000095 UJ	0.000095 U	0.0001 U	0.000095 U	0.0001 U	0.0001 U	0.0001 U	0.000095 U
Aroclor-1262 (PCB-1262)	mg/L	0.000095 U	0.000096 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.000097 U	0.000095 U	0.000095 U	0.000095 U	-	0.000095 U	0.0001 U	0.0001 U	0.0001 U	0.000095 U
Aroclor-1268 (PCB-1268)	mg/L	0.000095 U	0.000096 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.000097 U	0.000095 U	0.000095 U	0.000095 U	-	0.000095 U	0.0001 U	0.0001 U	0.0001 U	0.000095 U
Total PCBs	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
General Chemistry																		
Cyanide (amenable)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Phosphorus	mg/L	-	-	-	0.068 J	-	-	-	-	-	-	0.1 U	-	-	-	-	-	-
Field Parameters																		
Turbidity, field	NTU	15.9	4.57	6.76	4.07	3.81	2.35	2.35	4.14	1.58	4.52	4.61	1.51	1.13	1.24	2.62	3.94	1.85

Notes
Michigan Part 201 generic clean up criteria (updated September 28, 2012)
ID - Insufficient data to develop criterion
NLV - Hazardous substance is not likely to volatilize under most conditions
NA - Criterion or value is not available

Perimeter Status (1) - N - non-perimeter, Y - perimeter
mg/L - miligram per liter
NTU - Nephelometric Turbidity Unit

Notes:
U - Not detected at the associated reporting limit.
J - Estimated concentration.
UJ - Not detected; associated reporting limit is estimated.

TABLE 3.9

PART 201 CRITERIA EXCEEDANCES - GROUNDWATER
2013 RFI REPORT
FORMER GENRERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation		*CENTRAL02*	*CENTRAL02*	*CENTRAL02*	*CENTRAL02*	*CENTRAL02*	*CENTRAL02*	*CENTRAL02*	*CENTRAL02*	*CENTRAL02*	*CENTRAL02*	*CENTRAL02*	*CENTRAL02*	*CENTRAL02*	*CENTRAL02*	*CENTRAL02*	*CENTRAL03*
Aquifier		*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*
Perimeter Status (1)		*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*
Sample Location		*CRA-267M*	*CRA-267M*	*CRA-311M*	*CRA-311M*	*CRA-791M*	*CRA-791M*	*CRA-805M*	*CRA-805M*	*CRA-808M*	*CRA-808M*	*CRA-263M*	*CRA-263M*	*CRA-609M*	*CRA-609M*	*CRA-618M*	*CRA-618M*	*CRA-856M*
Sample Identification (GW-17358-)		*041712-JY-1036*	*040413-CT-031*	*041612-CB-1017*	*041613-DR-109*	*041812-CB-1053*	*040513-CT-033*	*041612-CB-1016*	*041613-DR-110*	*041812-CB-1054*	*041113-EM-083*	*041912-DR-1059*	*040513-JY-038*	*041912-DR-1066*	*040413-CT-032*	*041912-DR-1058*	*040813-JY-045*	*040513-DR-043*
Sample Date		*4/17/2012*	*4/4/2013*	*4/16/2012*	*4/16/2013*	*4/18/2012*	*4/5/2013*	*4/16/2012*	*4/16/2013*	*4/18/2012*	*4/11/2013*	*4/19/2012*	*4/5/2013*	*4/19/2012*	*4/4/2013*	*4/19/2012*	*4/8/2013*	*4/5/2013*
Sample Type																		
Volatile Organic Compounds (VOCs)	***Units***																	
1,1,1-Trichloroethane	mg/L	0.0042 J	0.013 U	0.001 U	0.001 U	0.001 U	0.001 U	0.02 U	0.025 U	0.001 U	0.001 U	0.004 U	0.001 U	0.0013	0.0012	0.001 U	0.001 U	0.0017
1,1,2,2-Tetrachloroethane	mg/L	0.0067 U	0.013 U	0.001 U	0.001 U	0.001 U	0.001 U	0.02 U	0.025 U	0.001 U	0.001 U	0.004 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,1,2-Trichloroethane	mg/L	0.0067 U	0.013 U	0.001 U	0.001 U	0.001 U	0.001 U	0.02 U	0.025 U	0.001 U	0.001 U	0.004 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,1-Dichloroethane	mg/L	0.0067 U	0.013 U	0.001 U	0.001 U	0.001 U	0.001 U	0.02 U	0.025 U	0.001 U	0.001 U	0.004 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,1-Dichloroethene	mg/L	0.0067 U	0.013 U	0.00041 J	0.00042 J	0.001 U	0.001 U	0.02 U	0.025 U	0.001 U	0.001 U	0.004 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,2,4-Trichlorobenzene	mg/L	0.0067 U	0.013 U	0.001 U	0.001 U	0.001 U	0.001 U	0.02 U	0.025 U	0.001 U	0.001 U	0.004 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,2-Dibromo-3-chloropropane (DBCP)	mg/L	0.0067 U	0.013 U	0.001 U	0.001 U	0.001 U	0.001 U	0.02 U	0.025 U	0.001 U	0.001 U	0.004 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,2-Dibromoethane (Ethylene dibromide)	mg/L	0.0067 U	0.013 U	0.001 U	0.001 U	0.001 U	0.001 U	0.02 U	0.025 U	0.001 U	0.001 U	0.004 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,2-Dichlorobenzene	mg/L	0.0067 U	0.013 U	0.001 U	0.001 U	0.001 U	0.001 U	0.02 U	0.025 U	0.001 U	0.001 U	0.004 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,2-Dichloroethane	mg/L	0.0067 U	0.013 U	0.001 U	0.001 U	0.001 U	0.001 U	0.02 U	0.025 U	0.001 U	0.001 U	0.004 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,2-Dichloropropane	mg/L	0.0067 U	0.013 U	0.001 U	0.001 U	0.001 U	0.001 U	0.02 U	0.025 U	0.001 U	0.001 U	0.004 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,3-Dichlorobenzene	mg/L	0.0067 U	0.013 U	0.001 U	0.001 U	0.001 U	0.001 U	0.02 U	0.025 U	0.001 U	0.001 U	0.004 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,4-Dichlorobenzene	mg/L	0.0067 U	0.013 U	0.001 U	0.001 U	0.001 U	0.001 U	0.02 U	0.025 U	0.001 U	0.001 U	0.004 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
2-Butanone (Methyl ethyl ketone) (MEK)	mg/L	0.067 U	0.13 U	0.01 U	0.01 U	0.01 U	0.01 U	0.2 U	0.25 U	0.0044 J	0.01 U	0.04 U	0.01 U	0.01 U	0.01 U	0.01 U	0.00081 J	0.01 U
2-Hexanone	mg/L	0.067 U	0.13 U	0.01 U	0.01 U	0.01 U	0.01 U	0.2 U	0.25 U	0.01 U	0.01 U	0.04 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	mg/L	0.067 U	0.13 U	0.01 U	0.01 U	0.01 U	0.01 U	0.2 U	0.25 U	0.01 U	0.01 U	0.04 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Acetone	mg/L	0.067 U	0.13 U	0.01 UJ	0.01 U	0.01 U	0.01 UJ	0.2 UJ	0.25 U	0.01 U	0.01 U	0.04 U	0.01 UJ	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Benzene	mg/L	0.0067 U	0.013 U	0.001 U	0.001 U	0.001 U	0.001 U	0.02 U	0.025 U	0.001 U	0.001 U	0.004 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Bromodichloromethane	mg/L	0.0067 U	0.013 U	0.001 U	0.001 U	0.001 U	0.001 U	0.02 U	0.025 U	0.001 U	0.001 U	0.004 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Bromoform	mg/L	0.0067 U	0.013 U	0.001 U	0.001 U	0.001 U	0.001 U	0.02 U	0.025 U	0.001 U	0.001 U	0.004 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Bromomethane (Methyl bromide)	mg/L	0.0067 U	0.013 U	0.001 U	0.001 U	0.001 U	0.001 U	0.02 U	0.025 U	0.001 U	0.001 U	0.004 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Carbon disulfide	mg/L	0.033 U	0.063 U	0.005 U	0.005 U	0.005 U	0.005 U	0.1 U	0.13 U	0.005 U	0.005 U	0.02 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Carbon tetrachloride	mg/L	0.0067 U	0.013 U	0.001 U	0.001 U	0.001 U	0.001 U	0.02 U	0.025 U	0.001 U	0.001 U	0.004 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Chlorobenzene	mg/L	0.0067 U	0.013 U	0.001 U	0.001 U	0.001 U	0.001 U	0.02 U	0.025 U	0.001 U	0.001 U	0.004 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Chloroethane	mg/L	0.0067 U	0.013 U	0.001 U	0.001 U	0.001 U	0.001 U	0.02 U	0.025 U	0.001 U	0.001 U	0.004 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Chloroform (Trichloromethane)	mg/L	0.005 J	0.0098 J	0.001 U	0.001 U	0.001 U	0.001 U	0.02 U	0.025 U	0.001 U	0.001 U	0.004 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.00067 J
Chloromethane (Methyl chloride)	mg/L	0.0067 U	0.013 U	0.001 U	0.001 U	0.001 U	0.001 U	0.02 U	0.025 U	0.001 U	0.001 U	0.004 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
cis-1,2-Dichloroethene	mg/L	0.019	0.0067 J	0.00069 J	0.00076 J	0.00028 J	0.001 U	**0.4[b]**	**0.61[b]**	0.001 U	0.001 U	**0.1[ab]**	0.019	0.001 U	0.001 U	0.001 U	0.001 U	0.00096 J
cis-1,3-Dichloropropene	mg/L	0.0067 U	0.013 U	0.001 U	0.001 U	0.001 U	0.001 U	0.02 U	0.025 U	0.001 U	0.001 U	0.004 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Cyclohexane	mg/L	0.0067 U	0.013 U	0.001 U	0.001 U	0.001 U	0.001 U	0.02 U	0.025 U	0.001 U	0.001 U	0.004 U	0.001 U	0.001 U	0.001 U	0.011	0.022	0.001 U
Dibromochloromethane	mg/L	0.0067 U	0.013 U	0.001 U	0.001 U	0.001 U	0.001 U	0.02 U	0.025 U	0.001 U	0.001 U	0.004 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Dichlorodifluoromethane (CFC-12)	mg/L	0.0067 U	0.013 U	0.001 U	0.001 U	0.001 U	0.001 U	0.02 U	0.025 U	0.001 U	0.001 U	0.004 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Ethylbenzene	mg/L	0.0067 U	0.013 U	0.001 U	0.001 U	0.001 U	0.001 U	0.02 U	0.025 U	0.001 U	0.001 U	0.004 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Isopropyl benzene	mg/L	0.0067 U	0.013 U	0.001 U	0.001 U	0.001 U	0.001 U	0.02 U	0.025 U	0.001 U	0.001 U	0.004 U	0.001 U	0.001 U	0.001 U	0.00051 J	0.00025 J	0.001 U
Methyl acetate	mg/L	0.067 U	0.13 U	0.01 U	0.01 U	0.01 U	0.01 U	0.2 U	0.25 U	0.01 U	0.01 U	0.04 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Methyl cyclohexane	mg/L	0.0067 U	0.013 U	0.001 U	0.001 U	0.001 U	0.001 U	0.02 U	0.025 U	0.001 U	0.001 U	0.004 U	0.001 U	0.001 U	0.001 U	0.00014 J	0.001 U	0.001 U
Methyl tert butyl ether (MTBE)	mg/L	0.033 U	0.013 U	0.005 U	0.001 U	0.005 U	0.001 U	0.1 U	0.025 U	0.005 U	0.001 U	0.02 U	0.001 U	0.005 U	0.001 U	0.005 U	0.001 U	0.001 U
Methylene chloride	mg/L	0.033 U	0.063 U	0.005 U	0.005 U	0.005 U	0.005 U	0.1 U	0.13 U	0.005 U	0.005 U	0.02 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Styrene	mg/L	0.0067 U	0.013 U	0.001 U	0.001 U	0.001 U	0.001 U	0.02 U	0.025 U	0.001 U	0.001 U	0.004 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Tetrachloroethene	mg/L	**0.23[bc]**	**0.27[bc]**	0.001 U	0.001 U	0.001 U	0.001 U	0.02 U	0.025 U	0.001 U	0.001 U	0.004 U	0.001 U	0.001 U	0.00069 J	0.001 U	0.001 U	**0.031[ab]**
Toluene	mg/L	0.0067 U	0.013 U	0.001 U	0.001 U	0.001 U	0.001 U	0.02 U	0.025 U	0.001 U	0.001 U	0.004 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
trans-1,2-Dichloroethene	mg/L	0.0067 U	0.013 U	0.001 U	0.001 U	0.001 U	0.001 U	**0.2[b]**	**0.26[b]**	0.001 U	0.001 U	0.011	0.0019	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
trans-1,3-Dichloropropene	mg/L	0.0067 U	0.013 U	0.001 U	0.001 U	0.001 U	0.001 U	0.02 U	0.025 U	0.001 U	0.001 U	0.004 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Trichloroethene	mg/L	**0.006 J[b]**	**0.0051 J[b]**	**0.016[b]**	**0.018[b]**	0.001 U	0.001 U	0.02 U	0.025 U	0.001 U	0.001 U	0.004 U	0.001 U	**0.0052[ab]**	**0.0057[ab]**	0.00095 J	0.00085 J	0.0033
Trichlorofluoromethane (CFC-11)	mg/L	0.0067 U	0.013 U	0.001 U	0.001 U	0.001 U	0.001 U	0.02 U	0.025 U	0.001 U	0.001 U	0.004 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Trifluorotrichloroethane (Freon 113)	mg/L	0.0067 U	0.013 U	0.001 U	0.001 U	0.001 U	0.001 U	0.02 U	0.025 U	0.001 U	0.001 U	0.004 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Vinyl chloride	mg/L	**0.0073[b]**	0.013 U	0.001 U	0.001 U	0.001 U	0.001 U	**0.17[bc]**	**0.32[bc]**	0.001 U	0.001 U	0.004 U	0.001	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Xylenes (total)	mg/L	0.013 U	0.025 U	0.002 U	0.002 U	0.002 U	0.002 U	0.04 U	0.05 U	0.002 U	0.002 U	0.008 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U

TABLE 3.9

PART 201 CRITERIA EXCEEDANCES - GROUNDWATER
2013 RFI REPORT
FORMER GENRERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation		*CENTRAL02*	*CENTRAL02*	*CENTRAL02*	*CENTRAL02*	*CENTRAL02*	*CENTRAL02*	*CENTRAL02*	*CENTRAL02*	*CENTRAL02*	*CENTRAL02*	*CENTRAL02*	*CENTRAL02*	*CENTRAL02*	*CENTRAL02*	*CENTRAL02*	*CENTRAL03*
Aquifier		*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*
Perimeter Status (1)		*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*
Sample Location		*CRA-267M*	*CRA-267M*	*CRA-311M*	*CRA-311M*	*CRA-791M*	*CRA-791M*	*CRA-805M*	*CRA-805M*	*CRA-808M*	*CRA-808M*	*CRA-263M*	*CRA-263M*	*CRA-609M*	*CRA-609M*	*CRA-618M*	*CRA-618M*	*CRA-856M*
Sample Identification (GW-17358-)		*041712-JY-1036*	*040413-CT-031*	*041612-CB-1017*	*041613-DR-109*	*041812-CB-1053*	*040513-CT-033*	*041612-CB-1016*	*041613-DR-110*	*041812-CB-1054*	*041113-EM-083*	*041912-DR-1059*	*040513-JY-038*	*041912-DR-1066*	*040413-CT-032*	*041912-DR-1058*	*040813-JY-045*	*040513-DR-043*
Sample Date		*4/17/2012*	*4/4/2013*	*4/16/2012*	*4/16/2013*	*4/18/2012*	*4/5/2013*	*4/16/2012*	*4/16/2013*	*4/18/2012*	*4/11/2013*	*4/19/2012*	*4/5/2013*	*4/19/2012*	*4/4/2013*	*4/19/2012*	*4/8/2013*	*4/5/2013*
Sample Type																		
Semi-Volatile Organic Compounds (SVOCs)																		
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	mg/L	0.005 U	0.0056 U	0.0053 U	0.0051 U	0.0053 U	0.0049 U	0.0052 U	0.0051 U	0.0053 U	0.0049 U	0.0052 U	0.0048 U	0.0052 U	0.005 U	0.012 U	0.012 U	0.0052 U
2,4,5-Trichlorophenol	mg/L	0.005 U	0.0056 U	0.0053 U	0.0051 U	0.0053 U	0.0049 U	0.0052 U	0.0051 U	0.0053 U	0.0049 U	0.0052 U	0.0048 U	0.0052 U	0.005 U	0.012 U	0.012 U	0.0052 U
2,4,6-Trichlorophenol	mg/L	0.004 U	0.0044 U	0.0043 U	0.004 U	0.0042 U	0.0039 U	0.0041 U	0.004 U	0.0042 U	0.0039 U	0.0041 U	0.0038 U	0.0042 U	0.004 U	0.0099 U	0.0095 U	0.0042 U
2,4-Dichlorophenol	mg/L	0.0099 U	0.011 U	0.011 U	0.01 U	0.011 U	0.0097 U	0.01 U	0.01 U	0.011 U	0.0098 U	0.01 U	0.0096 U	0.01 U	0.01 U	0.025 U	0.024 U	0.01 U
2,4-Dimethylphenol	mg/L	0.005 U	0.0056 U	0.0053 U	0.0051 U	0.0053 U	0.0049 U	0.0052 U	0.0051 U	0.0053 U	0.0049 U	0.0052 U	0.0048 U	0.0052 U	0.005 U	0.012 U	0.012 U	0.0052 U
2,4-Dinitrophenol	mg/L	0.02 U	0.022 U	0.021 U	0.02 U	0.021 U	0.019 U	0.021 U	0.02 U	0.021 U	0.02 U	0.021 U	0.019 U	0.021 U	0.02 U	0.05 U	0.048 U	0.021 U
2,4-Dinitrotoluene	mg/L	0.005 U	0.0056 U	0.0053 U	0.0051 U	0.0053 U	0.0049 U	0.0052 U	0.0051 U	0.0053 U	0.0049 U	0.0052 U	0.0048 U	0.0052 U	0.005 U	0.012 U	0.012 U	0.0052 U
2,6-Dinitrotoluene	mg/L	0.005 U	0.0056 U	0.0053 U	0.0051 U	0.0053 U	0.0049 U	0.0052 U	0.0051 U	0.0053 U	0.0049 U	0.0052 U	0.0048 U	0.0052 U	0.005 U	0.012 U	0.012 U	0.0052 U
2-Chloronaphthalene	mg/L	0.005 U	0.0056 U	0.0053 U	0.0051 U	0.0053 U	0.0049 U	0.0052 U	0.0051 U	0.0053 U	0.0049 U	0.0052 U	0.0048 U	0.0052 U	0.005 U	0.012 U	0.012 U	0.0052 U
2-Chlorophenol	mg/L	0.005 U	0.0056 U	0.0053 U	0.0051 U	0.0053 U	0.0049 U	0.0052 U	0.0051 U	0.0053 U	0.0049 U	0.0052 U	0.0048 U	0.0052 U	0.005 U	0.012 U	0.012 U	0.0052 U
2-Methylnaphthalene	mg/L	0.005 U	0.0056 U	0.0053 U	0.0051 U	0.0053 U	0.0049 U	0.0052 U	0.0051 U	0.0053 U	0.0049 U	0.0052 U	0.0048 U	0.0052 U	0.005 U	0.00034 J	0.012 U	0.0052 U
2-Methylphenol	mg/L	0.005 U	0.0056 U	0.0053 U	0.0051 U	0.0053 U	0.0049 U	0.0052 U	0.0051 U	0.0053 U	0.0049 U	0.0052 U	0.0048 U	0.0052 U	0.005 U	0.012 U	0.012 U	0.0052 U
2-Nitroaniline	mg/L	0.02 U	0.022 U	0.021 U	0.02 U	0.021 U	0.019 U	0.021 U	0.02 U	0.021 U	0.02 U	0.021 U	0.019 U	0.021 U	0.02 U	0.05 U	0.048 U	0.021 U
2-Nitrophenol	mg/L	0.005 U	0.0056 U	0.0053 U	0.0051 U	0.0053 U	0.0049 U	0.0052 U	0.0051 U	0.0053 U	0.0049 U	0.0052 U	0.0048 U	0.0052 U	0.005 U	0.012 U	0.012 U	0.0052 U
3&4-Methylphenol	mg/L	0.005 U	0.0056 U	0.0053 U	0.0051 U	0.0053 U	0.0049 U	0.0052 U	0.0051 U	0.0053 U	0.0049 U	0.0052 U	0.0048 U	0.0052 U	0.005 U	0.012 U	0.012 U	0.0052 U
3,3'-Dichlorobenzidine	mg/L	0.00099 U	0.0011 U	0.0011 U	0.001 U	0.0011 U	0.00097 U	0.001 U	0.001 U	0.0011 U	0.00098 U	0.001 U	R	0.001 U	0.001 U	0.0025 U	0.0024 U	0.001 U
3-Nitroaniline	mg/L	0.02 U	0.022 U	0.021 U	0.02 U	0.021 U	0.019 U	0.021 U	0.02 U	0.021 U	0.02 U	0.021 U	0.019 U	0.021 U	0.02 U	0.05 U	0.048 U	0.021 U
4,6-Dinitro-2-methylphenol	mg/L	0.02 U	0.022 U	0.021 U	0.02 U	0.021 U	0.019 U	0.021 U	0.02 U	0.021 U	0.02 U	0.021 U	0.019 U	0.021 U	0.02 U	0.05 U	0.048 U	0.021 U
4-Bromophenyl phenyl ether	mg/L	0.005 U	0.0056 U	0.0053 U	0.0051 U	0.0053 U	0.0049 U	0.0052 U	0.0051 U	0.0053 U	0.0049 U	0.0052 U	0.0048 U	0.0052 U	0.005 U	0.012 U	0.012 U	0.0052 U
4-Chloro-3-methylphenol	mg/L	0.005 U	0.0056 U	0.0053 U	0.0051 U	0.0053 U	0.0049 U	0.0052 U	0.0051 U	0.0053 U	0.0049 U	0.0052 U	0.0048 U	0.0052 U	0.005 U	0.012 U	0.012 U	0.0052 U
4-Chloroaniline	mg/L	0.0099 U	0.011 U	0.011 U	0.01 U	0.011 U	0.0097 U	0.01 U	0.01 U	0.011 U	0.0098 U	0.01 U	0.0096 U	0.01 U	0.01 U	0.025 U	0.024 U	0.01 U
4-Chlorophenyl phenyl ether	mg/L	0.005 U	0.0056 U	0.0053 U	0.0051 U	0.0053 U	0.0049 U	0.0052 U	0.0051 U	0.0053 U	0.0049 U	0.0052 U	0.0048 U	0.0052 U	0.005 U	0.012 U	0.012 U	0.0052 U
4-Nitroaniline	mg/L	0.02 U	0.022 U	0.021 U	0.02 U	0.021 U	0.019 U	0.021 U	0.02 U	0.021 U	0.02 U	0.021 U	0.019 U	0.021 U	0.02 U	0.05 U	0.048 U	0.021 U
4-Nitrophenol	mg/L	0.02 U	0.022 U	0.021 U	0.02 U	0.021 U	0.019 U	0.021 U	0.02 U	0.021 U	0.02 U	0.021 U	0.019 U	0.021 U	0.02 U	0.05 U	0.048 U	0.021 U
Acenaphthene	mg/L	0.005 U	0.0056 U	0.0053 U	0.0051 U	0.0053 U	0.0049 U	0.0052 U	0.0051 U	0.0053 U	0.0049 U	0.0052 U	0.0048 U	0.0052 U	0.005 U	0.012 U	0.012 U	0.0052 U
Acenaphthylene	mg/L	0.005 U	0.0056 U	0.0053 U	0.0051 U	0.0053 U	0.0049 U	0.0052 U	0.0051 U	0.0053 U	0.0049 U	0.0052 U	0.0048 U	0.0052 U	0.005 U	0.012 U	0.012 U	0.0052 U
Acetophenone	mg/L	0.005 U	0.0056 U	0.0053 U	0.0051 U	0.0053 U	0.0049 U	0.0052 U	0.0051 U	0.0053 U	0.0049 U	0.0052 U	0.0048 U	0.0052 U	0.005 U	0.012 U	0.012 U	0.0052 U
Anthracene	mg/L	0.005 U	0.0056 U	0.0053 U	0.0051 U	0.0053 U	0.0049 U	0.0052 U	0.0051 U	0.0053 U	0.0049 U	0.0052 U	0.0048 U	0.0052 U	0.005 U	0.012 U	0.012 U	0.0052 U
Atrazine	mg/L	0.003 U	0.0033 U	0.0032 U	0.003 U	0.0032 U	0.0029 U	0.0031 U	0.003 U	0.0032 U	0.0029 U	0.0031 U	0.0029 U	0.0031 U	0.003 U	0.0074 U	0.0071 U	0.0031 U
Benzaldehyde	mg/L	0.005 U	0.0056 U	0.0053 U	0.0051 U	0.0053 U	0.0049 U	0.0052 U	0.0051 U	0.0053 U	0.0049 U	0.0052 U	0.0048 U	0.0052 U	0.005 U	0.012 U	0.012 U	0.0052 U
Benzo(a)anthracene	mg/L	0.00099 U	0.0011 U	0.0011 U	0.001 U	0.0011 U	0.00097 U	0.001 U	0.001 U	0.0011 U	0.00098 U	0.001 U	0.00096 U	0.001 U	0.001 U	0.0025 U	0.0024 U	0.001 U
Benzo(a)pyrene	mg/L	0.00099 U	0.0011 U	0.0011 U	0.001 U	0.0011 U	0.00097 U	0.001 U	0.001 U	0.0011 U	0.00098 U	0.001 U	0.00096 U	0.001 U	0.001 U	0.0025 U	0.0024 U	0.001 U
Benzo(b)fluoranthene	mg/L	0.00099 U	0.0011 U	0.0011 U	0.001 U	0.0011 U	0.00097 U	0.001 U	0.001 U	0.0011 U	0.00098 U	0.001 U	0.00096 U	0.001 U	0.001 U	0.0025 U	0.0024 U	0.001 U
Benzo(g,h,i)perylene	mg/L	0.00099 U	0.0011 U	0.0011 U	0.001 U	0.0011 U	0.00097 U	0.001 U	0.001 U	0.0011 U	0.00098 U	0.001 U	0.00096 U	0.001 U	0.001 U	0.0025 U	0.0024 U	0.001 U
Benzo(k)fluoranthene	mg/L	0.00099 U	0.0011 U	0.0011 U	0.001 U	0.0011 U	0.00097 U	0.001 U	0.001 U	0.0011 U	0.00098 U	0.001 U	0.00096 U	0.001 U	0.001 U	0.0025 U	0.0024 U	0.001 U
Biphenyl (1,1-Biphenyl)	mg/L	0.005 U	0.0056 U	0.0053 U	0.0051 U	0.0053 U	0.0049 U	0.0052 U	0.0051 U	0.0053 U	0.0049 U	0.0052 U	0.0048 U	0.0052 U	0.005 U	0.012 U	0.012 U	0.0052 U
bis(2-Chloroethoxy)methane	mg/L	0.005 U	0.0056 U	0.0053 U	0.0051 U	0.0053 U	0.0049 U	0.0052 U	0.0051 U	0.0053 U	0.0049 U	0.0052 U	0.0048 U	0.0052 U	0.005 U	0.012 U	0.012 U	0.0052 U
bis(2-Chloroethyl)ether	mg/L	0.00099 U	0.0011 U	0.0011 U	0.001 U	0.0011 U	0.00097 U	0.001 U	0.001 U	0.0011 U	0.00098 U	0.001 U	0.00096 U	0.001 U	0.001 U	0.0025 U	0.0024 U	0.001 U
bis(2-Ethylhexyl)phthalate (DEHP)	mg/L	0.005 U	0.0056 U	0.00095 J	0.0051 U	0.0029 J	0.0049 U	0.0052 U	0.0051 U	0.0019 J	0.0049 U	0.0052 U	0.0048 U	0.0052 U	0.005 U	0.012 U	0.012 U	0.0047 J
Butyl benzylphthalate (BBP)	mg/L	0.005 U	0.0056 U	0.0053 U	0.0051 U	0.0053 U	0.0049 U	0.0052 U	0.0051 U	0.0053 U	0.0049 U	0.0052 U	0.0048 U	0.0052 U	0.005 U	0.012 U	0.012 U	0.0052 U
Caprolactam	mg/L	0.0099 U	0.011 U	0.011 U	0.01 U	0.011 U	0.0097 U	0.01 U	0.01 U	0.011 U	0.0098 U	0.01 U	0.0096 U	0.01 U	0.01 U	0.025 U	0.024 U	0.01 U
Carbazole	mg/L	0.0099 U	0.011 U	0.011 U	0.01 U	0.011 U	0.0097 U	0.01 U	0.01 U	0.011 U	0.0098 U	0.01 U	0.0096 U	0.01 U	0.01 U	0.025 U	0.024 U	0.01 U
Chrysene	mg/L	0.00099 U	0.0011 U	0.0011 U	0.001 U	0.0011 U	0.00097 U	0.001 U	0.001 U	0.0011 U	0.00098 U	0.001 U	0.00096 U	0.001 U	0.001 U	0.0025 U	0.0024 U	0.001 U
Dibenz(a,h)anthracene	mg/L	0.002 U	0.0022 U	0.0021 U	0.002 U	0.0021 U	0.0019 U	0.0021 U	0.002 U	0.0021 U	0.002 U	0.0021 U	0.0019 U	0.0021 U	0.002 U	0.005 U	0.0048 U	0.0021 U
Dibenzofuran	mg/L	0.004 U	0.0044 U	0.0043 U	0.004 U	0.0042 U	0.0039 U	0.0041 U	0.004 U	0.0042 U	0.0039 U	0.0041 U	0.0038 U	0.0042 U	0.004 U	0.0099 U	0.0095 U	0.0042 U
Diethyl phthalate	mg/L	0.005 U	0.0056 U	0.0053 U	0.0051 U	0.0053 U	0.0049 U	0.0052 U	0.0051 U	0.0053 U	0.0049 U	0.0052 U	0.0048 U	0.0052 U	0.005 U	0.012 U	0.012 U	0.0052 U
Dimethyl phthalate	mg/L	0.005 U	0.0056 U	0.0053 U	0.0051 U	0.0053 U	0.0049 U	0.0052 U	0.0051 U	0.0053 U	0.0049 U	0.0052 U	0.0048 U	0.0052 U	0.005 U	0.012 U	0.012 U	0.0052 U
Di-n-butylphthalate (DBP)	mg/L	0.005 U	0.0056 U	0.0053 U	0.0051 U	0.0053 U	0.0049 U	0.0052 U	0.0051 U	0.0053 U	0.0049 U	0.0052 U	0.0048 U	0.0052 U	0.005 U	0.012 U	0.012 U	0.0052 U
Di-n-octyl phthalate (DnOP)	mg/L	0.005 U	0.0056 U	0.0053 U	0.0051 U	0.0053 U	0.0049 U	0.0052 U	0.0051 U	0.0053 U	0.0049 U	0.0052 U	0.0048 U	0.0052 U	0.005 U	0.012 U	0.012 U	0.0052 U
Fluoranthene	mg/L	0.00099 U	0.0011 U	0.0011 U	0.001 U	0.0011 U	0.00097 U	0.001 U	0.001 U	0.0011 U	0.00098 U	0.001 U	0.00096 U	0.001 U	0.001 U	0.0025 U	0.0024 U	0.001 U
Fluorene	mg/L	0.005 U	0.0056 U	0.0053 U	0.0051 U	0.0053 U	0.0049 U	0.0052 U	0.0051 U	0.0053 U	0.0049 U	0.0052 U	0.0048 U	0.0052 U	0.005 U	0.012 U	0.012 U	0.0052 U
Hexachlorobenzene	mg/L	0.0002 U	0.00022 U	0.00021 U	0.0002 U	0.00021 U	0.00019 U	0.00021 U	0.0002 U	0.00021 U	0.0002 U	0.00021 U	0.00019 U	0.00021 U	0.0002 U	0.0005 U	0.00048 U	0.00021 U

TABLE 3.9

PART 201 CRITERIA EXCEEDANCES - GROUNDWATER
2013 RFI REPORT
FORMER GENRERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation		*CENTRAL02*	*CENTRAL02*	*CENTRAL02*	*CENTRAL02*	*CENTRAL02*	*CENTRAL02*	*CENTRAL02*	*CENTRAL02*	*CENTRAL02*	*CENTRAL02*	*CENTRAL02*	*CENTRAL02*	*CENTRAL02*	*CENTRAL02*	*CENTRAL02*	*CENTRAL03*
Aquifier		*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*
Perimeter Status (1)		*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*
Sample Location		*CRA-267M*	*CRA-267M*	*CRA-311M*	*CRA-311M*	*CRA-791M*	*CRA-791M*	*CRA-805M*	*CRA-805M*	*CRA-808M*	*CRA-808M*	*CRA-263M*	*CRA-263M*	*CRA-609M*	*CRA-609M*	*CRA-618M*	*CRA-856M*
Sample Identification (GW-17358-)		*041712-JY-1036*	*040413-CT-031*	*041612-CB-1017*	*041613-DR-109*	*041812-CB-1053*	*040513-CT-033*	*041612-CB-1016*	*041613-DR-110*	*041812-CB-1054*	*041113-EM-083*	*041912-DR-1059*	*040513-JY-038*	*041912-DR-1066*	*040413-CT-032*	*041912-DR-1058*	*040513-DR-043*
Sample Date		*4/17/2012*	*4/4/2013*	*4/16/2012*	*4/16/2013*	*4/18/2012*	*4/5/2013*	*4/16/2012*	*4/16/2013*	*4/18/2012*	*4/11/2013*	*4/19/2012*	*4/5/2013*	*4/19/2012*	*4/4/2013*	*4/19/2012*	*4/5/2013*
Sample Type																	
SVOCs Continued																	
Hexachlorobutadiene	mg/L	0.00099 U	0.0011 U	0.0011 U	0.001 U	0.0011 U	0.00097 U	0.001 U	0.001 U	0.0011 U	0.00098 U	0.001 U	0.00096 U	0.001 U	0.001 U	0.0025 U	0.0024 U	0.001 U
Hexachlorocyclopentadiene	mg/L	0.005 U	0.0056 U	0.0053 U	R	0.0053 U	0.0049 U	0.0052 U	R	0.0053 U	R	0.0052 U	0.0048 U	0.0052 U	0.005 U	0.012 U	R	0.0052 U
Hexachloroethane	mg/L	0.005 U	0.0056 U	0.0053 U	0.0051 U	0.0053 U	0.0049 U	0.0052 U	0.0051 U	0.0053 U	0.0049 U	0.0052 U	0.0048 U	0.0052 U	0.005 U	0.012 U	0.012 U	0.0052 U
Indeno(1,2,3-cd)pyrene	mg/L	0.002 U	0.0022 U	0.0021 U	0.002 U	0.0021 U	0.0019 U	0.0021 U	0.002 U	0.0021 U	0.002 U	0.0021 U	0.0019 U	0.0021 U	0.002 U	0.005 U	0.0048 U	0.0021 U
Isophorone	mg/L	0.005 U	0.0056 U	0.0053 U	0.0051 U	0.0053 U	0.0049 U	0.0052 U	0.0051 U	0.0053 U	0.0049 U	0.0052 U	0.0048 U	0.0052 U	0.005 U	0.012 U	0.012 U	0.0052 U
Naphthalene	mg/L	0.005 U	0.0056 U	0.0053 U	0.0051 U	0.0053 U	0.0049 U	0.0052 U	0.0051 U	0.0053 U	0.0049 U	0.0052 U	0.0048 U	0.0052 U	0.005 U	0.012 U	0.012 U	0.0052 U
Nitrobenzene	mg/L	0.003 U	0.0033 U	0.0032 U	0.003 U	0.0032 U	0.0029 U	0.0031 U	0.003 U	0.0032 U	0.0029 U	0.0031 U	0.0029 U	0.0031 U	0.003 U	0.0074 U	0.0071 U	0.0031 U
N-Nitrosodi-n-propylamine	mg/L	0.005 U	0.0056 U	0.0053 U	0.0051 U	0.0053 U	0.0049 U	0.0052 U	0.0051 U	0.0053 U	0.0049 U	0.0052 U	0.0048 U	0.0052 U	0.005 U	0.012 U	0.012 U	0.0052 U
N-Nitrosodiphenylamine	mg/L	0.005 U	0.0056 U	0.0053 U	0.0051 U	0.0053 U	0.0049 U	0.0052 U	0.0051 U	0.0053 U	0.0049 U	0.0052 U	0.0048 U	0.0052 U	0.005 U	0.012 U	0.012 U	0.0052 U
Pentachlorophenol	mg/L	0.005 U	0.0056 U	0.0053 U	0.0051 U	0.0053 U	0.0049 U	0.0052 U	0.0051 U	0.0053 U	0.0049 U	0.0052 U	0.0048 U	0.0052 U	0.005 U	0.012 U	0.012 U	0.0052 U
Phenanthrene	mg/L	0.002 U	0.0022 U	0.0021 U	0.002 U	0.0021 U	0.0019 U	0.0021 U	0.002 U	0.0021 U	0.002 U	0.0021 U	0.0019 U	0.0021 U	0.002 U	0.005 U	0.0048 U	0.0021 U
Phenol	mg/L	0.005 U	0.0056 U	0.0053 U	0.0051 U	0.0053 U	0.0049 U	0.0052 U	0.0051 U	0.0053 U	0.0049 U	0.0052 U	0.0048 U	0.0052 U	0.005 U	0.012 U	0.012 U	0.0052 U
Pyrene	mg/L	0.005 U	0.0056 U	0.0053 U	0.0051 U	0.0053 U	0.0049 U	0.0052 U	0.0051 U	0.0053 U	0.0049 U	0.0052 U	0.0048 U	0.0052 U	0.005 U	0.012 U	0.012 U	0.0052 U
Metals																		
Aluminum	mg/L	**0.075**[b]	**0.088**[b]	0.05 U	0.0088 J	0.05 U	0.05 U	0.035 J	0.05 U	0.05 U	0.05 U	0.05 U	**0.23**[ab]	**0.12**[ab]	0.05 U	0.05 U	0.019 J	0.05 U
Aluminum (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Antimony	mg/L	0.0003 J	0.002 U	0.00026 J	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.00024 J	0.002 U	0.0004 J	0.002 U	0.00014 J	0.002 U	0.002 U	0.002 U	0.002 U
Antimony (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Arsenic	mg/L	0.0018 J	0.00087 J	0.0023 J	0.0012 J	0.0099	**0.014**[bc]	**0.019**[bc]	**0.015**[bc]	0.0031 J	0.0035 J	0.0012 J	**0.034**[abc]	0.00052 J	0.005 U	0.0042 J	0.0026 J	0.001 J
Arsenic (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Barium	mg/L	0.039 J	0.043 J	0.064 J	0.053 J	0.25	0.22	0.14	0.16	0.088 J	0.088 J	0.096 J	0.024 J	0.049 J	0.1	0.13	0.12	0.054 J
Barium (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Beryllium	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Beryllium (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cadmium	mg/L	0.001 U	0.001 U	0.0003 J	0.00033 J	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Cadmium (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Calcium	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chromium	mg/L	0.01 U	0.01 U	0.01 U	0.001 J	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.00074 J	0.01 U	0.0011 J	0.01 U	0.01 U	0.01 U	0.0008 J	0.01 U
Chromium (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chromium III (trivalent)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chromium VI (hexavalent)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cobalt	mg/L	0.00012 J	0.00016 J	0.0016 J	0.0017 J	0.0068 J	0.0039 J	0.0022 J	0.00056 J	0.00081 J	0.00041 J	0.00056 J	0.00039 J	0.00016 J	0.00015 J	0.00021 J	0.00023 J	0.0023 J
Cobalt (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Copper	mg/L	0.004 U	0.0019 J	0.0035 J	0.004 U	0.00059 J	0.004 U	0.004 U	0.004 U	0.0011 J	0.004 U	0.002 J	0.0028 J	0.004 U	0.0011 J	0.00075 J	0.00061 J	0.004 U
Copper (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Iron	mg/L	**0.54**[b]	**0.45**[b]	0.2 U	0.2 U	**6.9**[b]	**6**[b]	**5.9**[b]	**6**[b]	**0.51**[b]	**0.62**[b]	0.2 U	0.26	0.14 J	0.2 U	**16**[ab]	**17**[ab]	0.2 U
Iron (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lead	mg/L	0.003 U	0.0012 J	0.003 U	0.00026 J	0.003 U	0.003 U	0.003 U	0.00017 J	0.003 U	0.003 U	0.003 U	0.003 U	0.0013 J	0.00044 J	0.0016 J	0.0013 J	0.003 U
Lead (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Magnesium	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Manganese	mg/L	**0.06**[b]	0.04 J	**1.5**[b]	**1.4**[b]	**0.5**[b]	**0.32**[b]	**0.78**[b]	**0.56**[b]	**0.2**[b]	**0.094**[b]	**0.25**[ab]	0.037 J	0.03 J	0.028 J	**0.54**[ab]	**0.47**[ab]	**0.18**[ab]
Manganese (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mercury	mg/L	0.04 U	0.0002 U	0.04 U	0.0002 U	0.04 U	0.0002 U	0.04 U	0.0002 U	0.04 U	0.0002 U	0.04 U	0.0002 U	0.04 U	0.0002 U	0.04 U	0.0002 U	0.0002 U
Mercury (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nickel	mg/L	0.00057 J	0.0014 J	0.0071 J	0.012 J	0.0045 J	0.0028 J	0.019 J	0.0045 J	0.0036 J	0.02 U	0.0019 J	0.0024 J	0.00098 J	0.0011 J	0.00046 J	0.0015 J	0.0025 J
Nickel (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Potassium	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Selenium	mg/L	0.0021 J	0.002 J	0.005 U	0.00024 J	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.0035 J	**0.0072**[c]	0.0027 J	0.0027 J	0.005 U	0.005 U	**0.0057**[c]
Selenium (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Silver	mg/L	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.000009 J	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Silver (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sodium	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

TABLE 3.9

PART 201 CRITERIA EXCEEDANCES - GROUNDWATER
2013 RFI REPORT
FORMER GENRERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation		*CENTRAL02*	*CENTRAL02*	*CENTRAL02*	*CENTRAL02*	*CENTRAL02*	*CENTRAL02*	*CENTRAL02*	*CENTRAL02*	*CENTRAL02*	*CENTRAL02*	*CENTRAL02*	*CENTRAL02*	*CENTRAL02*	*CENTRAL02*	*CENTRAL02*	*CENTRAL03*
Aquifier		*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*
Perimeter Status (1)		*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*
Sample Location		*CRA-267M*	*CRA-267M*	*CRA-311M*	*CRA-311M*	*CRA-791M*	*CRA-791M*	*CRA-805M*	*CRA-805M*	*CRA-808M*	*CRA-808M*	*CRA-263M*	*CRA-263M*	*CRA-609M*	*CRA-609M*	*CRA-618M*	*CRA-618M*	*CRA-856M*
Sample Identification (GW-17358-)		*041712-JY-1036*	*040413-CT-031*	*041612-CB-1017*	*041613-DR-109*	*041812-CB-1053*	*040513-CT-033*	*041612-CB-1016*	*041613-DR-110*	*041812-CB-1054*	*041113-EM-083*	*041912-DR-1059*	*040513-JY-038*	*041912-DR-1066*	*040413-CT-032*	*041912-DR-1058*	*040813-JY-045*	*040513-DR-043*
Sample Date		*4/17/2012*	*4/4/2013*	*4/16/2012*	*4/16/2013*	*4/18/2012*	*4/5/2013*	*4/16/2012*	*4/16/2013*	*4/18/2012*	*4/11/2013*	*4/19/2012*	*4/5/2013*	*4/19/2012*	*4/4/2013*	*4/19/2012*	*4/8/2013*	*4/5/2013*
Sample Type																		
Metals Continued																		
Thallium	mg/L	0.002 U	0.00023 J	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.00033 J	0.002 U	0.00086 J	0.002 U	0.00018 J	0.002 U	0.002 U	0.002 U
Thallium (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Vanadium	mg/L	0.004 U	0.004 U	0.004 U	0.00021 J	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	**0.015**[a]	0.004 U	0.004 U	0.004 U	0.00073 J	0.004 U
Vanadium (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Zinc	mg/L	0.05 U	0.05 U	0.05 U	0.05 U	0.003 J	0.05 U	0.05 U	0.05 U	0.0033 J	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.0031 J	0.05 U	0.05 U
Zinc (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Polychlorinated Biphenyls (PCBs)																		
Aroclor-1016 (PCB-1016)	mg/L	0.00011 U	0.000099 U	0.00011 U	0.0001 U	0.00011 U	0.000099 U	0.00011 U	0.0001 U	0.00011 U	0.0001 U	0.0001 U	0.000095 U	0.0001 U	0.000099 U	0.000098 U	0.000097 U	0.0001 U
Aroclor-1221 (PCB-1221)	mg/L	0.00011 U	0.000099 U	0.00011 U	0.0001 U	0.00011 U	0.000099 U	0.00011 U	0.0001 U	0.00011 U	0.0001 U	0.0001 U	0.000095 U	0.0001 U	0.000099 U	0.000098 U	0.000097 U	0.0001 U
Aroclor-1232 (PCB-1232)	mg/L	0.00011 U	0.000099 U	0.00011 U	0.0001 U	0.00011 U	0.000099 U	0.00011 U	0.0001 U	0.00011 U	0.0001 U	0.0001 U	0.000095 U	0.0001 U	0.000099 U	0.000098 U	0.000097 U	0.0001 U
Aroclor-1242 (PCB-1242)	mg/L	0.00011 U	0.000099 U	0.00011 U	0.0001 U	0.00011 U	0.000099 U	0.00011 U	0.0001 U	0.00011 U	0.0001 U	0.0001 U	0.000095 U	0.0001 U	0.000099 U	0.000098 U	0.000097 U	0.0001 U
Aroclor-1248 (PCB-1248)	mg/L	0.00011 U	0.000099 U	0.00011 U	0.0001 U	0.00011 U	0.000099 U	0.00011 U	0.0001 U	0.00011 U	0.0001 U	0.0001 U	0.000095 U	0.0001 U	0.000099 U	0.000098 U	0.000097 U	0.0001 U
Aroclor-1254 (PCB-1254)	mg/L	0.00011 U	0.000099 U	0.00011 U	0.0001 U	0.00011 U	0.000099 U	0.00011 U	0.0001 U	0.00011 U	0.0001 U	0.0001 U	0.000095 U	0.0001 U	0.000099 U	0.000098 U	0.000097 U	0.0001 U
Aroclor-1260 (PCB-1260)	mg/L	0.00011 U	0.000099 U	0.00011 U	0.0001 U	0.00011 U	0.000099 U	0.00011 U	0.0001 U	0.00011 U	0.0001 U	0.0001 UJ	0.000095 U	0.0001 UJ	0.000099 U	0.000098 UJ	0.000097 U	0.0001 U
Aroclor-1262 (PCB-1262)	mg/L	0.00011 U	0.000099 U	0.00011 U	0.0001 U	0.00011 U	0.000099 U	0.00011 U	0.0001 U	0.00011 U	0.0001 U	0.0001 U	0.000095 U	0.0001 U	0.000099 U	0.000098 U	0.000097 U	0.0001 U
Aroclor-1268 (PCB-1268)	mg/L	0.00011 U	0.000099 U	0.00011 U	0.0001 U	0.00011 U	0.000099 U	0.00011 U	0.0001 U	0.00011 U	0.0001 U	0.0001 U	0.000095 U	0.0001 U	0.000099 U	0.000098 U	0.000097 U	0.0001 U
Total PCBs	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
General Chemistry																		
Cyanide (amenable)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Phosphorus	mg/L	-	-	-	-	-	-	-	-	-	0.1 U	-	-	-	-	-	-	-
Field Parameters																		
Turbidity, field	NTU	2.2	5.21	0.74	1.54	2.93	4	3.1	3.46	1.94	2.4	3.75	6.97	8.02	2.23	2.51	0.99	0.49

Notes
Michigan Part 201 generic clean up criteria (updated September 28, 2012)
ID - Insufficient data to develop criterion
NLV - Hazardous substance is not likely to volatilize under most conditions
NA - Criterion or value is not available

Perimeter Status (1) - N - non-perimeter, Y - perimeter
mg/L - miligram per liter
NTU - Nephelometric Turbidity Unit

Notes:
U - Not detected at the associated reporting limit.
J - Estimated concentration.
UJ - Not detected; associated reporting limit is estimated.

TABLE 3.9

PART 201 CRITERIA EXCEEDANCES - GROUNDWATER
2013 RFI REPORT
FORMER GENRERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation		*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*
Aquifier		*Intermediate*	*Intermediate*	*Intermediate*	*Intermediate*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*
Perimeter Status (1)		*Y*	*Y*	*Y*	*Y*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*Y*	*Y*	*Y*
Sample Location		*CRA-711I*	*CRA-711I*	*CRA-784I*	*CRA-784I*	*CRA-137M*	*CRA-137M*	*CRA-743M*	*CRA-743M*	*CRA-755M*	*CRA-755M*	*CRA-806M*	*CRA-806M*	*CRA-807M*	*CRA-807M*	*CRA-744M*	*CRA-744M*	*CRA-745M*
Sample Identification (GW-17358-)		*041912-DR-1060*	*040513-DR-042*	*041912-JY-1065*	*040413-CT-026*	*042012-DR-1071*	*040513-CT-044*	*041912-JY-1064*	*040413-CT-021*	*042012-DR-1073*	*040513-CT-034*	*041212-DR-1002*	*040813-JY-055*	*041812-CB-1055*	*040913-JY-069*	*041912-JY-1061*	*040313-CT-019*	*041912-JY-1063*
Sample Date		*4/19/2012*	*4/5/2013*	*4/19/2012*	*4/4/2013*	*4/20/2012*	*4/5/2013*	*4/19/2012*	*4/4/2013*	*4/20/2012*	*4/5/2013*	*4/12/2012*	*4/8/2013*	*4/18/2012*	*4/9/2013*	*4/19/2012*	*4/3/2013*	*4/19/2012*
Sample Type																		
Volatile Organic Compounds (VOCs)	***Units***																	
1,1,1-Trichloroethane	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.013 U	0.0067 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.004 U	0.011 U	0.001 U	0.001 U	0.001 U
1,1,2,2-Tetrachloroethane	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.013 U	0.0067 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.004 U	0.011 U	0.001 U	0.001 U	0.001 U
1,1,2-Trichloroethane	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.013 U	0.0067 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.004 U	0.011 U	0.001 U	0.001 U	0.001 U
1,1-Dichloroethane	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.013 U	0.0067 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.004 U	0.011 U	0.001 U	0.001 U	0.001 U
1,1-Dichloroethene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.013 U	0.0067 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.004 U	0.011 U	0.001 U	0.001 U	0.001 U
1,2,4-Trichlorobenzene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.013 U	0.0067 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.004 U	0.011 U	0.001 U	0.001 U	0.001 U
1,2-Dibromo-3-chloropropane (DBCP)	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.013 U	0.0067 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.004 U	0.011 U	0.001 U	0.001 U	0.001 U
1,2-Dibromoethane (Ethylene dibromide)	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.013 U	0.0067 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.004 U	0.011 U	0.001 U	0.001 U	0.001 U
1,2-Dichlorobenzene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.013 U	0.0067 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.004 U	0.011 U	0.001 U	0.001 U	0.001 U
1,2-Dichloroethane	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.013 U	0.0067 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.004 U	0.011 U	0.001 U	0.001 U	0.001 U
1,2-Dichloropropane	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.013 U	0.0067 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.004 U	0.011 U	0.001 U	0.001 U	0.001 U
1,3-Dichlorobenzene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.013 U	0.0067 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.004 U	0.011 U	0.001 U	0.001 U	0.001 U
1,4-Dichlorobenzene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.013 U	0.0067 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.004 U	0.011 U	0.001 U	0.001 U	0.001 U
2-Butanone (Methyl ethyl ketone) (MEK)	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.13 U	0.067 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.04 U	0.11 U	0.01 U	0.01 U	0.01 UJ
2-Hexanone	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.13 U	0.067 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.04 U	0.11 U	0.01 U	0.01 U	0.01 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.13 U	0.067 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.04 U	0.11 U	0.01 U	0.01 U	0.01 U
Acetone	mg/L	0.01 U	0.01 UJ	0.01 U	0.01 U	0.13 U	0.067 U	0.01 U	0.01 U	0.01 U	0.01 UJ	0.01 U	0.01 U	0.04 U	0.11 U	0.01 U	0.01 U	0.01 UJ
Benzene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	**0.3[bc]**	**0.15[b]**	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.004 U	0.011 U	0.001 U	0.001 U	0.001 U
Bromodichloromethane	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.013 U	0.0067 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.004 U	0.011 U	0.001 U	0.001 U	0.001 U
Bromoform	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.013 U	0.0067 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.004 U	0.011 U	0.001 U	0.001 U	0.001 U
Bromomethane (Methyl bromide)	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.013 U	0.0067 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.004 U	0.011 U	0.001 U	0.001 U	0.001 U
Carbon disulfide	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.063 U	0.033 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.02 U	0.056 U	0.005 U	0.005 U	0.005 U
Carbon tetrachloride	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.013 U	0.0067 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.004 U	0.011 U	0.001 U	0.001 U	0.001 U
Chlorobenzene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.013 U	0.0067 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.004 U	0.011 U	0.001 U	0.001 U	0.001 U
Chloroethane	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.013 U	0.0067 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.004 U	0.011 U	0.001 U	0.001 U	0.001 U
Chloroform (Trichloromethane)	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.013 U	0.0067 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.004 U	0.011 U	0.001 U	0.001 U	0.001 U
Chloromethane (Methyl chloride)	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.013 U	0.0067 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.004 U	0.011 U	0.001 U	0.001 U	0.001 U
cis-1,2-Dichloroethene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.013 U	0.0067 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0072	0.0068 J	0.001 U	0.001 U	0.001 U
cis-1,3-Dichloropropene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.013 U	0.0067 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.004 U	0.011 U	0.001 U	0.001 U	0.001 U
Cyclohexane	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.013	0.013	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.004 U	0.011 U	0.001 U	0.001 U	0.001 U
Dibromochloromethane	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.013 U	0.0067 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.004 U	0.011 U	0.001 U	0.001 U	0.001 U
Dichlorodifluoromethane (CFC-12)	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.013 U	0.0067 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.004 U	0.011 U	0.001 U	0.001 U	0.001 U
Ethylbenzene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.013 U	0.0067 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0007 J	0.004 U	0.011 U	0.001 U	0.001 U	0.001 U
Isopropyl benzene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.0021 J	0.0025 J	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.004 U	0.011 U	0.001 U	0.001 U	0.001 U
Methyl acetate	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.13 U	0.067 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.04 U	0.11 U	0.01 U	0.01 U	0.01 UJ
Methyl cyclohexane	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.0074 J	0.0049 J	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.004 U	0.011 U	0.001 U	0.001 U	0.001 U
Methyl tert butyl ether (MTBE)	mg/L	0.005 U	0.001 U	0.005 U	0.001 U	0.0031 J	0.0072	0.005 U	0.001 U	0.005 U	0.001 U	0.005 U	0.001 U	0.02 U	0.011 U	0.005 U	0.001 U	0.005 U
Methylene chloride	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.063 U	0.033 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.02 U	0.056 U	0.005 U	0.005 U	0.005 U
Styrene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.013 U	0.0067 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.004 U	0.011 U	0.001 U	0.001 U	0.001 U
Tetrachloroethene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.013 U	0.0034 J	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	**0.13[bc]**	**0.25[bc]**	0.001 U	0.001 U	0.001 U
Toluene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.013 U	0.0067 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.004 U	0.011 U	0.001 U	0.001 U	0.001 U
trans-1,2-Dichloroethene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.013 U	0.0067 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.004 U	0.011 U	0.001 U	0.001 U	0.001 U
trans-1,3-Dichloropropene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.013 U	0.0067 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.004 U	0.011 U	0.001 U	0.001 U	0.001 U
Trichloroethene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.013 U	0.0067 U	0.00023 J	0.001 U	0.001 U	0.001 U	**0.0055[b]**	**0.0056[b]**	**0.0054[b]**	**0.006 J[b]**	0.001 U	0.001 U	0.001 U
Trichlorofluoromethane (CFC-11)	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.013 U	0.0067 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.004 U	0.011 U	0.001 U	0.001 U	0.001 U
Trifluorotrichloroethane (Freon 113)	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.013 U	0.0067 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.004 U	0.011 U	0.001 U	0.001 U	0.001 U
Vinyl chloride	mg/L	**0.0089[ab]**	**0.01[ab]**	0.001 U	0.001 U	0.013 U	0.0067 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.004 U	0.011 U	0.001 U	0.001 U	0.001 U
Xylenes (total)	mg/L	0.002 U	0.002 U	0.002 U	0.002 U	0.025 U	0.013 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.0032	0.008 U	0.022 U	0.002 U	0.002 U	0.002 U

TABLE 3.9

PART 201 CRITERIA EXCEEDANCES - GROUNDWATER
2013 RFI REPORT
FORMER GENRERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation		*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*
Aquifier		*Intermediate*	*Intermediate*	*Intermediate*	*Intermediate*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*
Perimeter Status (1)		*Y*	*Y*	*Y*	*Y*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*Y*	*Y*	*Y*
Sample Location		*CRA-711I*	*CRA-711I*	*CRA-784I*	*CRA-784I*	*CRA-137M*	*CRA-137M*	*CRA-743M*	*CRA-743M*	*CRA-755M*	*CRA-755M*	*CRA-806M*	*CRA-806M*	*CRA-807M*	*CRA-807M*	*CRA-744M*	*CRA-744M*	*CRA-745M*
Sample Identification (GW-17358-)		*041912-DR-1060*	*040513-DR-042*	*041912-JY-1065*	*040413-CT-026*	*042012-DR-1071*	*040513-CT-044*	*041912-JY-1064*	*040413-CT-021*	*042012-DR-1073*	*040513-CT-034*	*041212-DR-1002*	*040813-JY-055*	*041812-CB-1055*	*040913-JY-069*	*041912-JY-1061*	*040313-CT-019*	*041912-JY-1063*
Sample Date		*4/19/2012*	*4/5/2013*	*4/19/2012*	*4/4/2013*	*4/20/2012*	*4/5/2013*	*4/19/2012*	*4/4/2013*	*4/20/2012*	*4/5/2013*	*4/12/2012*	*4/8/2013*	*4/18/2012*	*4/9/2013*	*4/19/2012*	*4/3/2013*	*4/19/2012*
Sample Type																		
Semi-Volatile Organic Compounds (SVOCs)																		
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	mg/L	0.0053 U	0.0054 U	0.005 U	0.0048 U	0.0048 U	0.0049 U	0.0049 U	0.0053 U	0.005 U	0.0048 U	0.0051 U	0.0048 U	0.0051 U	0.0048 U	0.0049 U	0.0052 U	0.0048 U
2,4,5-Trichlorophenol	mg/L	0.0053 U	0.0054 U	0.005 U	0.0048 U	0.0048 U	0.0049 U	0.0049 U	0.0053 U	0.005 U	0.0048 U	0.0051 U	0.0048 U	0.0051 U	0.0048 U	0.0049 U	0.0052 U	0.0048 U
2,4,6-Trichlorophenol	mg/L	0.0042 U	0.0043 U	0.004 U	0.0038 U	0.0038 U	0.0039 U	0.0039 U	0.0042 U	0.004 U	0.0038 U	0.0041 U	0.0038 U	0.0041 U	0.0038 U	0.0039 U	0.0041 U	0.0038 U
2,4-Dichlorophenol	mg/L	0.011 U	0.011 U	0.0099 U	0.0095 U	0.0095 U	0.0098 U	0.0097 U	0.011 U	0.01 U	0.0096 U	0.01 U	0.0095 U	0.01 U	0.0095 U	0.0098 U	0.01 U	0.0095 U
2,4-Dimethylphenol	mg/L	0.0053 U	0.0054 U	0.005 U	0.0048 U	0.0048 U	0.0049 U	0.0049 U	0.0053 U	0.005 U	0.0048 U	0.0051 U	0.0048 U	0.0051 U	0.0048 U	0.0049 U	0.0052 U	0.0048 U
2,4-Dinitrophenol	mg/L	0.021 U	0.022 U	0.02 U	0.019 U	0.019 U	0.02 U	0.019 U	0.021 U	0.02 U	0.019 U	0.02 U	0.019 U	0.02 U	0.019 U	0.02 U	0.021 U	0.019 U
2,4-Dinitrotoluene	mg/L	0.0053 U	0.0054 U	0.005 U	0.0048 U	0.0048 U	0.0049 U	0.0049 U	0.0053 U	0.005 U	0.0048 U	0.0051 U	0.0048 U	0.0051 U	0.0048 U	0.0049 U	0.0052 U	0.0048 U
2,6-Dinitrotoluene	mg/L	0.0053 U	0.0054 U	0.005 U	0.0048 U	0.0048 U	0.0049 U	0.0049 U	0.0053 U	0.005 U	0.0048 U	0.0051 U	0.0048 U	0.0051 U	0.0048 U	0.0049 U	0.0052 U	0.0048 U
2-Chloronaphthalene	mg/L	0.0053 U	0.0054 U	0.005 U	0.0048 U	0.0048 U	0.0049 U	0.0049 U	0.0053 U	0.005 U	0.0048 U	0.0051 U	0.0048 U	0.0051 U	0.0048 U	0.0049 U	0.0052 U	0.0048 U
2-Chlorophenol	mg/L	0.0053 U	0.0054 U	0.005 U	0.0048 U	0.0048 U	0.0049 U	0.0049 U	0.0053 U	0.005 U	0.0048 U	0.0051 U	0.0048 U	0.0051 U	0.0048 U	0.0049 U	0.0052 U	0.0048 U
2-Methylnaphthalene	mg/L	0.0053 U	0.0054 U	0.005 U	0.0048 U	0.0048 U	0.0049 U	0.0049 U	0.0053 U	0.005 U	0.0048 U	0.0051 U	0.0048 U	0.0051 U	0.0048 U	0.0049 U	0.0052 U	0.0048 U
2-Methylphenol	mg/L	0.0053 U	0.0054 U	0.005 U	0.0048 U	0.0048 U	0.0049 U	0.0049 U	0.0053 U	0.005 U	0.0048 U	0.0051 U	0.0048 U	0.0051 U	0.0048 U	0.0049 U	0.0052 U	0.0048 U
2-Nitroaniline	mg/L	0.021 U	0.022 U	0.02 U	0.019 U	0.019 U	0.02 U	0.019 U	0.021 U	0.02 U	0.019 U	0.02 U	0.019 U	0.02 U	0.019 U	0.02 U	0.021 U	0.019 U
2-Nitrophenol	mg/L	0.0053 U	0.0054 U	0.005 U	0.0048 U	0.0048 U	0.0049 U	0.0049 U	0.0053 U	0.005 U	0.0048 U	0.0051 U	0.0048 U	0.0051 U	0.0048 U	0.0049 U	0.0052 U	0.0048 U
3&4-Methylphenol	mg/L	0.0053 U	0.0054 U	0.005 U	0.0048 U	0.0048 U	0.0049 U	0.0049 U	0.0053 U	0.005 U	0.0048 U	0.0051 U	0.0048 U	0.0051 U	0.0048 U	0.0049 U	0.0052 U	0.0048 U
3,3'-Dichlorobenzidine	mg/L	0.0011 U	0.0011 U	0.00099 U	0.00095 U	0.00095 U	0.00098 U	0.00097 U	0.0011 U	0.001 U	0.00096 U	0.001 U	0.00095 U	0.001 U	0.00095 U	0.00098 U	0.001 U	R
3-Nitroaniline	mg/L	0.021 U	0.022 U	0.02 U	0.019 U	0.019 U	0.02 U	0.019 U	0.021 U	0.02 U	0.019 U	0.02 U	0.019 U	0.02 U	0.019 U	0.02 U	0.021 U	0.019 U
4,6-Dinitro-2-methylphenol	mg/L	0.021 U	0.022 U	0.02 U	0.019 U	0.019 U	0.02 U	0.019 U	0.021 U	0.02 U	0.019 U	0.02 U	0.019 U	0.02 U	0.019 U	0.02 U	0.021 U	0.019 U
4-Bromophenyl phenyl ether	mg/L	0.0053 U	0.0054 U	0.005 U	0.0048 U	0.0048 U	0.0049 U	0.0049 U	0.0053 U	0.005 U	0.0048 U	0.0051 U	0.0048 U	0.0051 U	0.0048 U	0.0049 U	0.0052 U	0.0048 U
4-Chloro-3-methylphenol	mg/L	0.0053 U	0.0054 U	0.005 U	0.0048 U	0.0048 U	0.0049 U	0.0049 U	0.0053 U	0.005 U	0.0048 U	0.0051 U	0.0048 U	0.0051 U	0.0048 U	0.0049 U	0.0052 U	0.0048 U
4-Chloroaniline	mg/L	0.011 U	0.011 U	0.0099 U	0.0095 U	0.0095 U	0.0098 U	0.0097 U	0.011 U	0.01 U	0.0096 U	0.01 U	0.0095 U	0.01 U	0.0095 U	0.0098 U	0.01 U	0.0095 U
4-Chlorophenyl phenyl ether	mg/L	0.0053 U	0.0054 U	0.005 U	0.0048 U	0.0048 U	0.0049 U	0.0049 U	0.0053 U	0.005 U	0.0048 U	0.0051 U	0.0048 U	0.0051 U	0.0048 U	0.0049 U	0.0052 U	0.0048 U
4-Nitroaniline	mg/L	0.021 U	0.022 U	0.02 U	0.019 U	0.019 U	0.02 U	0.019 U	0.021 U	0.02 U	0.019 U	0.02 U	0.019 U	0.02 U	0.019 U	0.02 U	0.021 U	0.019 U
4-Nitrophenol	mg/L	0.021 U	0.022 U	0.02 U	0.019 U	0.019 U	0.02 U	0.019 U	0.021 U	0.02 U	0.019 U	0.02 U	0.019 U	0.02 U	0.019 U	0.02 U	0.021 U	0.019 U
Acenaphthene	mg/L	0.0053 U	0.0054 U	0.005 U	0.0048 U	0.0048 U	0.0049 U	0.0049 U	0.0053 U	0.005 U	0.0048 U	0.0051 U	0.0048 U	0.0051 U	0.0048 U	0.0049 U	0.0052 U	0.0048 U
Acenaphthylene	mg/L	0.0053 U	0.0054 U	0.005 U	0.0048 U	0.0048 U	0.0049 U	0.0049 U	0.0053 U	0.005 U	0.0048 U	0.0051 U	0.0048 U	0.0051 U	0.0048 U	0.0049 U	0.0052 U	0.0048 U
Acetophenone	mg/L	0.0053 U	0.0054 U	0.005 U	0.0048 U	0.0048 U	0.0049 U	0.0049 U	0.0053 U	0.005 U	0.0048 U	0.0051 U	0.0048 U	0.0051 U	0.0048 U	0.0049 U	0.0052 U	0.0048 U
Anthracene	mg/L	0.0053 U	0.0054 U	0.005 U	0.0048 U	0.0048 U	0.0049 U	0.0049 U	0.0053 U	0.005 U	0.0048 U	0.0051 U	0.0048 U	0.0051 U	0.0048 U	0.0049 U	0.0052 U	0.0048 U
Atrazine	mg/L	0.0032 U	0.0032 U	0.003 U	0.0029 U	0.0029 U	0.0029 U	0.0029 U	0.0032 U	0.003 U	0.0029 U	0.0031 U	0.0029 U	0.0031 U	0.0029 U	0.0029 U	0.0031 U	0.0029 U
Benzaldehyde	mg/L	0.0053 U	0.0054 U	0.005 U	0.0048 U	0.0048 U	0.0049 U	0.0049 U	0.0053 U	0.005 U	0.0048 U	0.0051 U	0.0048 U	0.0051 U	0.0048 U	0.0049 U	0.0052 U	0.0048 U
Benzo(a)anthracene	mg/L	0.0011 U	0.0011 U	0.00099 U	0.00095 U	0.00095 U	0.00098 U	0.00097 U	0.0011 U	0.001 U	0.00096 U	0.00014 J	0.00095 U	0.001 U	0.00095 U	0.00098 U	0.001 U	0.00095 U
Benzo(a)pyrene	mg/L	0.0011 U	0.0011 U	0.00099 U	0.00095 U	0.00095 U	0.00098 U	0.00097 U	0.0011 U	0.001 U	0.00096 U	0.00035 J	0.00095 U	0.001 U	0.00095 U	0.00098 U	0.001 U	0.00095 U
Benzo(b)fluoranthene	mg/L	0.0011 U	0.0011 U	0.00099 U	0.00095 U	0.00095 U	0.00098 U	0.00097 U	0.0011 U	0.001 U	0.00096 U	0.00023 J	0.00095 U	0.001 U	0.00095 U	0.00098 U	0.001 U	0.00095 U
Benzo(g,h,i)perylene	mg/L	0.0011 U	0.0011 U	0.00099 U	0.00095 U	0.00095 U	0.00098 U	0.00097 U	0.0011 U	0.001 U	0.00096 U	**0.00028 J[S]**	0.00095 U	0.001 U	0.00095 U	0.00098 U	0.001 U	0.00095 U
Benzo(k)fluoranthene	mg/L	0.0011 U	0.0011 U	0.00099 U	0.00095 U	0.00095 U	0.00098 U	0.00097 U	0.0011 U	0.001 U	0.00096 U	0.0003 J	0.00095 U	0.001 U	0.00095 U	0.00098 U	0.001 U	0.00095 U
Biphenyl (1,1-Biphenyl)	mg/L	0.0053 U	0.0054 U	0.005 U	0.0048 U	0.0048 U	0.0049 U	0.0049 U	0.0053 U	0.005 U	0.0048 U	0.0051 U	0.0048 U	0.0051 U	0.0048 U	0.0049 U	0.0052 U	0.0048 U
bis(2-Chloroethoxy)methane	mg/L	0.0053 U	0.0054 U	0.005 U	0.0048 U	0.0048 U	0.0049 U	0.0049 U	0.0053 U	0.005 U	0.0048 U	0.0051 U	0.0048 U	0.0051 U	0.0048 U	0.0049 U	0.0052 U	0.0048 U
bis(2-Chloroethyl)ether	mg/L	0.0011 U	0.0011 U	0.00099 U	0.00095 U	0.00095 U	0.00098 U	0.00097 U	0.0011 U	0.001 U	0.00096 U	0.001 U	0.00095 U	0.001 U	0.00095 U	0.00098 U	0.001 U	0.00095 U
bis(2-Ethylhexyl)phthalate (DEHP)	mg/L	0.0053 U	0.0054 U	0.005 U	0.0048 U	0.0048 U	0.00079 J	0.0049 U	0.0053 U	0.005 U	0.0011 J	0.0051 U	0.0048 U	0.0051 U	0.0048 U	0.0049 U	0.0052 U	0.0048 U
Butyl benzylphthalate (BBP)	mg/L	0.0053 U	0.0054 U	0.005 U	0.0048 U	0.0048 U	0.0049 U	0.0049 U	0.0053 U	0.005 U	0.0048 U	0.0051 U	0.00088 J	0.0051 U	0.0048 U	0.0049 U	0.00086 J	0.0048 U
Caprolactam	mg/L	0.011 U	0.0021 J	0.0099 U	0.0095 U	0.0095 U	0.0098 U	0.0097 U	0.011 U	0.01 U	0.0096 U	0.01 U	0.0095 U	0.01 U	0.0095 U	0.0098 U	0.0011 J	0.0095 U
Carbazole	mg/L	0.011 U	0.011 U	0.0099 U	0.0095 U	0.0095 U	0.0098 U	0.0097 U	0.011 U	0.01 U	0.0096 U	0.01 U	0.0095 U	0.01 U	0.0095 U	0.0098 U	0.01 U	0.0095 U
Chrysene	mg/L	0.0011 U	0.0011 U	0.00099 U	0.00095 U	0.00095 U	0.00098 U	0.00097 U	0.0011 U	0.001 U	0.00096 U	0.00024 J	0.00095 U	0.001 U	0.00095 U	0.00098 U	0.001 U	0.00095 U
Dibenz(a,h)anthracene	mg/L	0.0021 U	0.0022 U	0.002 U	0.0019 U	0.0019 U	0.002 U	0.0019 U	0.0021 U	0.002 U	0.0019 U	0.002 U	0.0019 U	0.002 U	0.0019 U	0.002 U	0.0021 U	0.0019 U
Dibenzofuran	mg/L	0.0042 U	0.0043 U	0.004 U	0.0038 U	0.0038 U	0.0039 U	0.0039 U	0.0042 U	0.004 U	0.0038 U	0.0041 U	0.0038 U	0.0041 U	0.0038 U	0.0039 U	0.0041 U	0.0038 U
Diethyl phthalate	mg/L	0.0053 U	0.0054 U	0.005 U	0.0048 U	0.0048 U	0.0049 U	0.0049 U	0.0053 U	0.005 U	0.0048 U	0.0051 U	0.0048 U	0.0051 U	0.0048 U	0.0049 U	0.0052 U	0.0048 U
Dimethyl phthalate	mg/L	0.0053 U	0.0054 U	0.005 U	0.0048 U	0.0048 U	0.0049 U	0.0049 U	0.0053 U	0.005 U	0.0048 U	0.0051 U	0.0048 U	0.0051 U	0.0048 U	0.0049 U	0.0052 U	0.0048 U
Di-n-butylphthalate (DBP)	mg/L	0.0053 U	0.0054 U	0.005 U	0.0048 U	0.0048 U	0.0049 U	0.0049 U	0.0053 U	0.005 U	0.0048 U	0.0051 U	0.0048 U	0.0051 U	0.0048 U	0.0049 U	0.0052 U	0.0048 U
Di-n-octyl phthalate (DnOP)	mg/L	0.0053 U	0.0054 U	0.005 U	0.0048 U	0.0048 U	0.0049 U	0.0049 U	0.0053 U	0.005 U	0.0048 U	0.0051 U	0.0048 U	0.0051 U	0.0048 U	0.0049 U	0.0052 U	0.0048 U
Fluoranthene	mg/L	0.0011 U	0.0011 U	0.00099 U	0.00095 U	0.00095 U	0.00098 U	0.00097 U	0.0011 U	0.001 U	0.00096 U	0.00012 J	0.00095 U	0.001 U	0.00095 U	0.00098 U	0.001 U	0.00095 U
Fluorene	mg/L	0.0053 U	0.0054 U	0.005 U	0.0048 U	0.0048 U	0.0049 U	0.0049 U	0.0053 U	0.005 U	0.0048 U	0.0051 U	0.0048 U	0.0051 U	0.0048 U	0.0049 U	0.0052 U	0.0048 U
Hexachlorobenzene	mg/L	0.00021 U	0.00022 U	0.0002 U	0.00019 U	0.00019 U	0.0002 U	0.00019 U	0.00021 U	0.0002 U	0.00019 U	0.0002 U	0.00019 U	0.0002 U	0.00019 U	0.0002 U	0.00021 U	0.00019 U

TABLE 3.9

PART 201 CRITERIA EXCEEDANCES - GROUNDWATER
2013 RFI REPORT
FORMER GENRERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation		*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*
Aquifier		*Intermediate*	*Intermediate*	*Intermediate*	*Intermediate*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*
Perimeter Status (1)		*Y*	*Y*	*Y*	*Y*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*Y*	*Y*	*Y*
Sample Location		*CRA-711I*	*CRA-711I*	*CRA-784I*	*CRA-784I*	*CRA-137M*	*CRA-137M*	*CRA-743M*	*CRA-743M*	*CRA-755M*	*CRA-755M*	*CRA-806M*	*CRA-806M*	*CRA-807M*	*CRA-807M*	*CRA-744M*	*CRA-744M*	*CRA-745M*
Sample Identification (GW-17358-)		*041912-DR-1060*	*040513-DR-042*	*041912-JY-1065*	*040413-CT-026*	*042012-DR-1071*	*040513-CT-044*	*041912-JY-1064*	*040413-CT-021*	*042012-DR-1073*	*040513-CT-034*	*041212-DR-1002*	*040813-JY-055*	*041812-CB-1055*	*040913-JY-069*	*041912-JY-1061*	*040313-CT-019*	*041912-JY-1063*
Sample Date		*4/19/2012*	*4/5/2013*	*4/19/2012*	*4/4/2013*	*4/20/2012*	*4/5/2013*	*4/19/2012*	*4/4/2013*	*4/20/2012*	*4/5/2013*	*4/12/2012*	*4/8/2013*	*4/18/2012*	*4/9/2013*	*4/19/2012*	*4/3/2013*	*4/19/2012*
Sample Type																		
SVOCs Continued																		
Hexachlorobutadiene	mg/L	0.0011 U	0.0011 U	0.00099 U	0.00095 U	0.00095 U	0.00098 U	0.00097 U	0.0011 U	0.001 U	0.00096 U	0.001 U	0.00095 U	0.001 U	0.00095 U	0.00098 U	0.001 U	0.00095 U
Hexachlorocyclopentadiene	mg/L	0.0053 U	0.0054 U	0.005 U	0.0048 U	0.0048 U	0.0049 U	0.0049 U	0.0053 U	0.005 U	0.0048 U	0.0051 U	R	0.0051 U	R	0.0049 U	0.0052 U	0.0048 U
Hexachloroethane	mg/L	0.0053 U	0.0054 U	0.005 U	0.0048 U	0.0048 U	0.0049 U	0.0049 U	0.0053 U	0.005 U	0.0048 U	0.0051 U	0.0048 U	0.0051 U	0.0048 U	0.0049 U	0.0052 U	0.0048 U
Indeno(1,2,3-cd)pyrene	mg/L	0.0021 U	0.0022 U	0.002 U	0.0019 U	0.0019 U	0.002 U	0.0019 U	0.0021 U	0.002 U	0.0019 U	0.002 U	0.0019 U	0.002 U	0.0019 U	0.002 U	0.0021 U	0.0019 U
Isophorone	mg/L	0.0053 U	0.0054 U	0.005 U	0.0048 U	0.0048 U	0.0049 U	0.0049 U	0.0053 U	0.005 U	0.0048 U	0.0051 U	0.0048 U	0.0051 U	0.0048 U	0.0049 U	0.0052 U	0.0048 U
Naphthalene	mg/L	0.0053 U	0.0054 U	0.005 U	0.0048 U	0.0048 U	0.0049 U	0.0049 U	0.0053 U	0.005 U	0.0048 U	0.0051 U	0.0048 U	0.0051 U	0.0048 U	0.0049 U	0.0052 U	0.0048 U
Nitrobenzene	mg/L	0.0032 U	0.0032 U	0.003 U	0.0029 U	0.0029 U	0.0029 U	0.0029 U	0.0032 U	0.003 U	0.0029 U	0.0031 U	0.0029 U	0.0031 U	0.0029 U	0.0029 U	0.0031 U	0.0029 U
N-Nitrosodi-n-propylamine	mg/L	0.0053 U	0.0054 U	0.005 U	0.0048 U	0.0048 U	0.0049 U	0.0049 U	0.0053 U	0.005 U	0.0048 U	0.0051 U	0.0048 U	0.0051 U	0.0048 U	0.0049 U	0.0052 U	0.0048 U
N-Nitrosodiphenylamine	mg/L	0.0053 U	0.0054 U	0.005 U	0.0048 U	0.0048 U	0.0049 U	0.0049 U	0.0053 U	0.005 U	0.0048 U	0.0051 U	0.0048 U	0.0051 U	0.0048 U	0.0049 U	0.0052 U	0.0048 U
Pentachlorophenol	mg/L	0.0053 U	0.0054 U	0.005 U	0.0048 U	0.0048 U	0.0049 U	0.0049 U	0.0053 U	0.005 U	0.0048 U	0.0051 U	0.0048 U	0.0051 U	0.0048 U	0.0049 U	0.0052 U	0.0048 U
Phenanthrene	mg/L	0.0021 U	0.0022 U	0.002 U	0.0019 U	0.0019 U	0.002 U	0.0019 U	0.0021 U	0.002 U	0.0019 U	0.002 U	0.0019 U	0.002 U	0.0019 U	0.002 U	0.0021 U	0.0019 U
Phenol	mg/L	0.0053 U	0.0012 J	0.005 U	0.0048 U	0.0058	0.005	0.0049 U	0.0053 U	0.005 U	0.0048 U	0.0051 U	0.0048 U	0.0051 U	0.0048 U	0.0049 U	0.0052 U	0.0048 U
Pyrene	mg/L	0.0053 U	0.0054 U	0.005 U	0.0048 U	0.0048 U	0.0049 U	0.0049 U	0.0053 U	0.005 U	0.0048 U	0.00013 J	0.0048 U	0.0051 U	0.0048 U	0.0049 U	0.0052 U	0.0048 U
Metals																		
Aluminum	mg/L	0.039 J	0.028 J	**0.14**[ab]	0.05 U	0.05 U	0.05 U	0.028 J	**0.45**[b]	0.05 U	0.05 U	**0.092**[b]	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Aluminum (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Antimony	mg/L	0.002 U	0.002 U	0.00016 J	0.002 U	0.002 U	0.002 U	0.00033 J	0.002 U	0.00013 J	0.002 U	0.00022 J	0.002 U	0.00016 J	0.002 U	0.00019 J	0.002 U	0.002 U
Antimony (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Arsenic	mg/L	**0.018**[abc]	**0.025**[abc]	**0.016**[abc]	**0.018**[abc]	0.0026 J	0.001 J	0.00043 J	0.00085 J	0.0017 J	0.00063 J	0.0032 J	0.005	0.0021 J	0.0013 J	0.0015 J	0.0015 J	0.0013 J
Arsenic (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Barium	mg/L	0.084 J	0.11	0.081 J	0.072 J	0.15	0.19	0.063 J	0.095 J	0.064 J	0.076 J	0.045 J	0.045 J	0.12	0.12	0.025 J	0.019 J	0.027 J
Barium (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Beryllium	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Beryllium (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cadmium	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.0004 J	0.001 U	0.001 U	0.001 U	0.00047 J	0.001 U	0.00015 J	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Cadmium (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Calcium	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chromium	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.0013 J	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Chromium (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chromium III (trivalent)	mg/L	-	-	-	-	-	-	0.01 U	-	0.01 U	-	-	-	0.01 U	-	-	-	0.01 U
Chromium VI (hexavalent)	mg/L	-	-	-	-	-	-	0.01 U	-	0.01 U	-	-	-	0.01 U	-	-	-	0.01 U
Cobalt	mg/L	0.00028 J	0.02 U	0.00034 J	0.0001 J	0.02 U	0.00013 J	0.00048 J	0.0012 J	0.0029 J	0.001 J	0.0033 J	0.0031 J	0.0011 J	0.00074 J	0.00085 J	0.0013 J	0.0026 J
Cobalt (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Copper	mg/L	0.0008 J	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.0018 J	0.0038 J	0.0038 J	0.004 U	0.0014 J	0.00049 J	0.0011 J	0.004 U	0.00063 J	0.004 U	0.00059 J
Copper (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Iron	mg/L	**1.1**[ab]	**1.5**[ab]	**0.88**[ab]	**1.3**[ab]	**7.7**[b]	**7**[b]	0.2 U	**0.8**[b]	0.2 U	0.2 U	**0.85**[b]	**2.1**[b]	0.04 J	0.088 J	0.2 U	**3.7**[ab]	**2.2**[ab]
Iron (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lead	mg/L	0.00063 J	0.0002 J	0.00028 J	0.003 U	0.00075 J	0.00063 J	0.003 U	0.00055 J	0.003 U	0.003 U	0.00038 J	0.00025 J	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U
Lead (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Magnesium	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Manganese	mg/L	0.04 J	0.029 J	**0.074**[ab]	**0.065**[ab]	**0.25**[b]	**0.57**[b]	**0.073**[b]	0.037 J	**2**[b]	**0.66**[b]	**0.88**[b]	**0.9**[b]	**0.6**[b]	**0.45**[b]	**0.15**[ab]	**0.52**[ab]	**1.8**[ab]
Manganese (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mercury	mg/L	0.04 U	0.0002 U	0.04 U	**0.00027**[c]	0.04 U	0.0002 U	0.04 U	0.0002 U	0.04 U	0.0002 U	0.04 U	0.0002 U	0.04 U	0.0002 U	0.04 U	0.0002 U	0.04 U
Mercury (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nickel	mg/L	0.00083 J	0.00047 J	0.00083 J	0.00022 J	0.0012 J	0.0003 J	0.002 J	0.0046 J	0.051	0.0072 J	0.053	0.069	0.0024 J	0.0017 J	0.0036 J	0.002 J	0.0027 J
Nickel (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Potassium	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Selenium	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.0049 J	**0.022**[c]	0.0037 J	0.0038 J	0.005 U	0.005 U	0.005 U	0.005 U	**0.0054**[c]	0.0043 J	0.005 U
Selenium (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Silver	mg/L	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Silver (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sodium	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

TABLE 3.9

PART 201 CRITERIA EXCEEDANCES - GROUNDWATER
2013 RFI REPORT
FORMER GENRERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation		*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*
Aquifier		*Intermediate*	*Intermediate*	*Intermediate*	*Intermediate*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*
Perimeter Status (1)		*Y*	*Y*	*Y*	*Y*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*Y*	*Y*	*Y*
Sample Location		*CRA-711I*	*CRA-711I*	*CRA-784I*	*CRA-784I*	*CRA-137M*	*CRA-137M*	*CRA-743M*	*CRA-743M*	*CRA-755M*	*CRA-755M*	*CRA-806M*	*CRA-806M*	*CRA-807M*	*CRA-807M*	*CRA-744M*	*CRA-744M*	*CRA-745M*
Sample Identification (GW-17358-)		*041912-DR-1060*	*040513-DR-042*	*041912-JY-1065*	*040413-CT-026*	*042012-DR-1071*	*040513-CT-044*	*041912-JY-1064*	*040413-CT-021*	*042012-DR-1073*	*040513-CT-034*	*041212-DR-1002*	*040813-JY-055*	*041812-CB-1055*	*040913-JY-069*	*041912-JY-1061*	*040313-CT-019*	*041912-JY-1063*
Sample Date		*4/19/2012*	*4/5/2013*	*4/19/2012*	*4/4/2013*	*4/20/2012*	*4/5/2013*	*4/19/2012*	*4/4/2013*	*4/20/2012*	*4/5/2013*	*4/12/2012*	*4/8/2013*	*4/18/2012*	*4/9/2013*	*4/19/2012*	*4/3/2013*	*4/19/2012*
Sample Type																		
Metals Continued																		
Thallium	mg/L	0.002 U	0.002 U	0.002 U	0.002 U	0.00021 J	0.002 U	0.002 U	0.002 U	0.0003 J	0.00014 J	0.0003 J	0.002 U	0.002 U	0.002 U	0.002 U	0.00018 J	0.002 U
Thallium (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Vanadium	mg/L	0.004 U	0.004 U	0.004 U	0.004 U	0.001 J	0.00077 J	0.004 U	0.0012 J	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U
Vanadium (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Zinc	mg/L	0.0074 J	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.0028 J	0.05 U	0.05 U	0.05 U	0.0041 J	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Zinc (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Polychlorinated Biphenyls (PCBs)																		
Aroclor-1016 (PCB-1016)	mg/L	0.000098 U	0.000095 U	0.000099 U	0.0001 U	0.0001 U	0.000098 U	0.000097 U	0.00011 U	0.000098 U	0.000096 U	0.0001 U	0.000095 U	0.00011 U	0.000098 U	0.000098 U	0.0001 U	0.000095 U
Aroclor-1221 (PCB-1221)	mg/L	0.000098 U	0.000095 U	0.000099 U	0.0001 U	0.0001 U	0.000098 U	0.000097 U	0.00011 U	0.000098 U	0.000096 U	0.0001 U	0.000095 U	0.00011 U	0.000098 U	0.000098 U	0.0001 U	0.000095 U
Aroclor-1232 (PCB-1232)	mg/L	0.000098 U	0.000095 U	0.000099 U	0.0001 U	0.0001 U	0.000098 U	0.000097 U	0.00011 U	0.000098 U	0.000096 U	0.0001 U	0.000095 U	0.00011 U	0.000098 U	0.000098 U	0.0001 U	0.000095 U
Aroclor-1242 (PCB-1242)	mg/L	0.000098 U	0.000095 U	0.000099 U	0.0001 U	0.0001 U	0.000098 U	0.000097 U	0.00011 U	0.000098 U	0.000096 U	0.0001 U	0.000095 U	0.00011 U	0.000098 U	0.000098 U	0.0001 U	0.000095 U
Aroclor-1248 (PCB-1248)	mg/L	0.000098 U	0.000095 U	0.000099 U	0.0001 U	0.0001 U	0.000098 U	0.000097 U	0.00011 U	0.000098 U	0.000096 U	0.0001 U	0.000095 U	0.00011 U	0.000098 U	0.000098 U	0.0001 U	0.000095 U
Aroclor-1254 (PCB-1254)	mg/L	0.000098 U	0.000095 U	0.000099 U	0.0001 U	0.0001 U	0.000098 U	0.000097 U	0.00011 U	0.000098 U	0.000096 U	0.0001 U	0.000095 U	0.00011 U	0.000098 U	0.000098 U	0.0001 U	0.000095 U
Aroclor-1260 (PCB-1260)	mg/L	0.000098 UJ	0.000095 U	0.000099 UJ	0.0001 U	0.0001 U	0.000098 U	0.000097 UJ	0.00011 U	0.000098 UJ	0.000096 U	0.0001 UJ	0.000095 U	0.00011 U	0.000098 U	0.000098 UJ	0.0001 U	0.000095 UJ
Aroclor-1262 (PCB-1262)	mg/L	0.000098 U	0.000095 U	0.000099 U	0.0001 U	-	0.000098 U	0.000097 U	0.00011 U	-	0.000096 U	0.0001 U	0.000095 U	0.00011 U	0.000098 U	0.000098 U	0.0001 U	0.000095 U
Aroclor-1268 (PCB-1268)	mg/L	0.000098 U	0.000095 U	0.000099 U	0.0001 U	-	0.000098 U	0.000097 U	0.00011 U	-	0.000096 U	0.0001 U	0.000095 U	0.00011 U	0.000098 U	0.000098 U	0.0001 U	0.000095 U
Total PCBs	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
General Chemistry																		
Cyanide (amenable)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.01 U	0.005 U	0.01 U
Phosphorus	mg/L	-	-	-	-	-	-	-	-	-	-	-	0.1 U	-	-	-	-	-
Field Parameters																		
Turbidity, field	NTU	10.9	11.9	4.84	4.83	1.42	2.41	4.83	20.90	0.98	2.01	1.48	1.1	1.55	1.03	3.49	3.38	1.16

Notes
Michigan Part 201 generic clean up criteria (updated September 28, 2012)
ID - Insufficient data to develop criterion
NLV - Hazardous substance is not likely to volatilize under most conditions
NA - Criterion or value is not available

Perimeter Status (1) - N - non-perimeter, Y - perimeter
mg/L - miligram per liter
NTU - Nephelometric Turbidity Unit

Notes:
U - Not detected at the associated reporting limit.
J - Estimated concentration.
UJ - Not detected; associated reporting limit is estimated.

TABLE 3.9

PART 201 CRITERIA EXCEEDANCES - GROUNDWATER
2013 RFI REPORT
FORMER GENRERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation		*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*EAST01*	*EAST01*	*EAST01*	*EAST01*
Aquifier		*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Lower Shallow*	*Lower Shallow*	*Shallow*	*Shallow*
Perimeter Status (1)		*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*N*	*N*
Sample Location		*CRA-745M*	*CRA-745M*	*CRA-749M*	*CRA-749M*	*CRA-750M*	*CRA-750M*	*CRA-750M*	*CRA-751M*	*CRA-751M*	*CRA-752M*	*CRA-752M*	*CRA-753M*	*CRA-753M*	*CRA-826ML*	*CRA-826ML*	*CRA-775M*	*CRA-775M*
Sample Identification (GW-17358-)		*040413-CT-022*	*040413-CT-023*	*041912-JY-1062*	*040413-CT-024*	*041712-JY-1031*	*041712-JY-1032*	*040413-CT-027*	*041712-JY-1033*	*040413-CT-028*	*041712-JY-1034*	*040413-CT-029*	*041712-JY-1035*	*040413-CT-030*	*041812-EM-1049*	*040213-CT-013*	*041113-EM-093*	*041113-EM-094*
Sample Date		*4/4/2013*	*4/4/2013*	*4/19/2012*	*4/4/2013*	*4/17/2012*	*4/17/2012*	*4/4/2013*	*4/17/2012*	*4/4/2013*	*4/17/2012*	*4/4/2013*	*4/17/2012*	*4/4/2013*	*4/18/2012*	*4/2/2013*	*4/11/2013*	*4/11/2013*
Sample Type			*Duplicate*				*Duplicate*											*Duplicate*
Volatile Organic Compounds (VOCs)	***Units***																	
1,1,1-Trichloroethane	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.009	0.009	0.0079	0.0014	0.0013	0.001 U	0.001 U	0.024	0.027	0.001 U	0.001 U	0.001 U	0.001 U
1,1,2,2-Tetrachloroethane	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.0083 U	0.0083 U	0.005 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,1,2-Trichloroethane	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.0083 U	0.0083 U	0.005 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,1-Dichloroethane	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.0041 J	0.0046 J	0.0027 J	0.001 U	0.001 U	0.002	0.0024	0.011	0.0087	0.001 U	0.001 U	0.001 U	0.001 U
1,1-Dichloroethene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.0083 U	0.0083 U	0.005 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.00053 J	0.001 U	0.001 U	0.001 U	0.001 U
1,2,4-Trichlorobenzene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.0083 U	0.0083 U	0.005 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,2-Dibromo-3-chloropropane (DBCP)	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.0083 U	0.0083 U	0.005 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,2-Dibromoethane (Ethylene dibromide)	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.0083 U	0.0083 U	0.005 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,2-Dichlorobenzene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.0083 U	0.0083 U	0.005 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,2-Dichloroethane	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.0083 U	0.0083 U	0.005 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,2-Dichloropropane	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.0083 U	0.0083 U	0.005 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,3-Dichlorobenzene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.0083 U	0.0083 U	0.005 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,4-Dichlorobenzene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.0083 U	0.0083 U	0.005 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
2-Butanone (Methyl ethyl ketone) (MEK)	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.083 U	0.083 U	0.05 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.00089 J	0.00068 J
2-Hexanone	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.083 U	0.083 U	0.05 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.083 U	0.083 U	0.05 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.00039 J	0.00038 J
Acetone	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.083 U	0.083 U	0.05 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.0017 J	0.0015 J
Benzene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.0083 U	0.0083 U	0.005 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Bromodichloromethane	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.0083 U	0.0083 U	0.005 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Bromoform	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.0083 U	0.0083 U	0.005 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Bromomethane (Methyl bromide)	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.0083 U	0.0083 U	0.005 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Carbon disulfide	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.042 U	0.042 U	0.025 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Carbon tetrachloride	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.0083 U	0.0083 U	0.005 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Chlorobenzene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.0083 U	0.0083 U	0.005 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Chloroethane	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.0083 U	0.0083 U	0.005 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Chloroform (Trichloromethane)	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.0083 U	0.0083 U	0.005 U	0.001 U	0.001 U	0.001 U	0.001 U	0.00038 J	0.00049 J	0.001 U	0.001 U	0.001 U	0.001 U
Chloromethane (Methyl chloride)	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.0083 U	0.0083 U	0.005 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
cis-1,2-Dichloroethene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.053	0.057	0.051	0.001 U	0.001 U	0.013	0.014	0.014	0.0049	0.001 U	0.001 U	0.001 U	0.001 U
cis-1,3-Dichloropropene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.0083 U	0.0083 U	0.005 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Cyclohexane	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.0083 U	0.0083 U	0.005 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Dibromochloromethane	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.0083 U	0.0083 U	0.005 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Dichlorodifluoromethane (CFC-12)	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.0083 U	0.0083 U	0.005 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Ethylbenzene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.0083 U	0.0083 U	0.005 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Isopropyl benzene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.0083 U	0.0083 U	0.005 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Methyl acetate	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.083 U	0.083 U	0.05 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Methyl cyclohexane	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.0083 U	0.0083 U	0.005 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Methyl tert butyl ether (MTBE)	mg/L	0.001 U	0.001 U	0.005 U	0.001 U	0.042 U	0.042 U	0.005 U	0.005 U	0.001 U	0.005 U	0.001 U	0.005 U	0.001 U	0.005 U	0.001 U	0.001 U	0.001 U
Methylene chloride	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.042 U	0.042 U	0.025 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Styrene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.0083 U	0.0083 U	0.005 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Tetrachloroethene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	**0.18[abc]**	**0.18[abc]**	**0.13[abc]**	0.001 U	0.00049 J	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Toluene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.0083 U	0.0083 U	0.005 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
trans-1,2-Dichloroethene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.0036 J	0.0037 J	0.0033 J	0.001 U	0.001 U	0.0019	0.002	0.0022	0.0009 J	0.001 U	0.001 U	0.001 U	0.001 U
trans-1,3-Dichloropropene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.0083 U	0.0083 U	0.005 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Trichloroethene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	**0.014[ab]**	**0.014[ab]**	**0.049[ab]**	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Trichlorofluoromethane (CFC-11)	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.0083 U	0.0083 U	0.005 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Trifluorotrichloroethane (Freon 113)	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.0083 U	0.0083 U	0.005 U	0.001 U	0.001 U	0.001 U	0.001 U	0.00062 J	0.00079 J	0.001 U	0.001 U	0.001 U	0.001 U
Vinyl chloride	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.0083 U	0.0083 U	0.005 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0016	0.0007 J	0.001 U	0.001 U	0.001 U	0.001 U
Xylenes (total)	mg/L	0.002 U	0.002 U	0.002 U	0.002 U	0.017 U	0.017 U	0.01 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.00056 J	0.0006 J

TABLE 3.9

PART 201 CRITERIA EXCEEDANCES - GROUNDWATER
2013 RFI REPORT
FORMER GENRERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation		*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*EAST01*	*EAST01*	*EAST01*	*EAST01*
Aquifier		*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Lower Shallow*	*Lower Shallow*	*Shallow*	*Shallow*
Perimeter Status (1)		*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*N*	*N*
Sample Location		*CRA-745M*	*CRA-745M*	*CRA-749M*	*CRA-749M*	*CRA-750M*	*CRA-750M*	*CRA-750M*	*CRA-751M*	*CRA-751M*	*CRA-752M*	*CRA-752M*	*CRA-753M*	*CRA-753M*	*CRA-826ML*	*CRA-826ML*	*CRA-775M*	*CRA-775M*
Sample Identification (GW-17358-)		*040413-CT-022*	*040413-CT-023*	*041912-JY-1062*	*040413-CT-024*	*041712-JY-1031*	*041712-JY-1032*	*040413-CT-027*	*041712-JY-1033*	*040413-CT-028*	*041712-JY-1034*	*040413-CT-029*	*041712-JY-1035*	*040413-CT-030*	*041812-EM-1049*	*040213-CT-013*	*041113-EM-093*	*041113-EM-094*
Sample Date		*4/4/2013*	*4/4/2013*	*4/19/2012*	*4/4/2013*	*4/17/2012*	*4/17/2012*	*4/4/2013*	*4/17/2012*	*4/4/2013*	*4/17/2012*	*4/4/2013*	*4/17/2012*	*4/4/2013*	*4/18/2012*	*4/2/2013*	*4/11/2013*	*4/11/2013*
Sample Type			*Duplicate*				*Duplicate*											*Duplicate*
Semi-Volatile Organic Compounds (SVOCs)																		
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	mg/L	0.0053 U	0.0052 U	0.0049 U	0.0048 U	0.0049 U	0.0049 U	0.0051 U	0.0049 U	0.0054 U	0.0048 U	0.0052 U	0.0048 U	0.0048 U	0.0049 U	0.0048 U	0.05 U	0.049 U
2,4,5-Trichlorophenol	mg/L	0.0053 U	0.0052 U	0.0049 U	0.0048 U	0.0049 U	0.0049 U	0.0051 U	0.0049 U	0.0054 U	0.0048 U	0.0052 U	0.0048 U	0.0048 U	0.0049 U	0.0048 U	0.05 U	0.049 U
2,4,6-Trichlorophenol	mg/L	0.0042 U	0.0042 U	0.0039 U	0.0038 U	0.0039 U	0.0039 U	0.004 U	0.0039 U	0.0043 U	0.0038 U	0.0042 U	0.0038 U	0.0038 U	0.0039 U	0.0038 U	0.04 U	0.039 U
2,4-Dichlorophenol	mg/L	0.011 U	0.01 U	0.0097 U	0.0095 U	0.0098 U	0.0098 U	0.01 U	0.0097 U	0.011 U	0.0095 U	0.01 U	0.0096 U	0.0095 U	0.0098 U	0.0096 U	0.1 U	0.098 U
2,4-Dimethylphenol	mg/L	0.0053 U	0.0052 U	0.0049 U	0.0048 U	0.0049 U	0.0049 U	0.0051 U	0.0049 U	0.0054 U	0.0048 U	0.0052 U	0.0048 U	0.0048 U	0.0049 U	0.0048 U	0.05 U	0.049 U
2,4-Dinitrophenol	mg/L	0.021 U	0.021 U	0.019 U	0.019 U	0.02 U	0.02 U	0.02 U	0.019 U	0.022 U	0.019 U	0.021 U	0.019 U	0.019 U	0.02 U	0.019 U	0.2 U	0.2 U
2,4-Dinitrotoluene	mg/L	0.0053 U	0.0052 U	0.0049 U	0.0048 U	0.0049 U	0.0049 U	0.0051 U	0.0049 U	0.0054 U	0.0048 U	0.0052 U	0.0048 U	0.0048 U	0.0049 U	0.0048 U	0.05 U	0.049 U
2,6-Dinitrotoluene	mg/L	0.0053 U	0.0052 U	0.0049 U	0.0048 U	0.0049 U	0.0049 U	0.0051 U	0.0049 U	0.0054 U	0.0048 U	0.0052 U	0.0048 U	0.0048 U	0.0049 U	0.0048 U	0.05 U	0.049 U
2-Chloronaphthalene	mg/L	0.0053 U	0.0052 U	0.0049 U	0.0048 U	0.0049 U	0.0049 U	0.0051 U	0.0049 U	0.0054 U	0.0048 U	0.0052 U	0.0048 U	0.0048 U	0.0049 U	0.0048 U	0.05 U	0.049 U
2-Chlorophenol	mg/L	0.0053 U	0.0052 U	0.0049 U	0.0048 U	0.0049 U	0.0049 U	0.0051 U	0.0049 U	0.0054 U	0.0048 U	0.0052 U	0.0048 U	0.0048 U	0.0049 U	0.0048 U	0.05 U	0.049 U
2-Methylnaphthalene	mg/L	0.0053 U	0.0052 U	0.0049 U	0.0048 U	0.0049 U	0.0049 U	0.0051 U	0.0049 U	0.0054 U	0.0048 U	0.0052 U	0.0048 U	0.0048 U	0.0049 U	0.0048 U	0.05 U	0.049 U
2-Methylphenol	mg/L	0.0053 U	0.0052 U	0.0049 U	0.0048 U	0.0049 U	0.0049 U	0.0051 U	0.0049 U	0.0054 U	0.0048 U	0.0052 U	0.0048 U	0.0048 U	0.0049 U	0.0048 U	0.05 U	0.049 U
2-Nitroaniline	mg/L	0.021 U	0.021 U	0.019 U	0.019 U	0.02 U	0.02 U	0.02 U	0.019 U	0.022 U	0.019 U	0.021 U	0.019 U	0.019 U	0.02 U	0.019 U	0.2 U	0.2 U
2-Nitrophenol	mg/L	0.0053 U	0.0052 U	0.0049 U	0.0048 U	0.0049 U	0.0049 U	0.0051 U	0.0049 U	0.0054 U	0.0048 U	0.0052 U	0.0048 U	0.0048 U	0.0049 U	0.0048 U	0.05 U	0.049 U
3&4-Methylphenol	mg/L	0.0053 U	0.0052 U	0.0049 U	0.0048 U	0.0049 U	0.0049 U	0.0051 U	0.0049 U	0.0054 U	0.0048 U	0.0052 U	0.0048 U	0.0048 U	0.0049 U	0.0048 U	0.05 U	0.049 U
3,3'-Dichlorobenzidine	mg/L	0.0011 U	0.001 U	0.00097 U	0.00095 U	0.00098 U	0.00098 U	0.001 U	0.00097 U	0.0011 U	0.00095 U	0.001 U	0.00096 U	0.00095 U	R	0.00096 U	0.01 U	0.0098 U
3-Nitroaniline	mg/L	0.021 U	0.021 U	0.019 U	0.019 U	0.02 U	0.02 U	0.02 U	0.019 U	0.022 U	0.019 U	0.021 U	0.019 U	0.019 U	0.02 U	0.019 U	0.2 U	0.2 U
4,6-Dinitro-2-methylphenol	mg/L	0.021 U	0.021 U	0.019 U	0.019 U	0.02 U	0.02 U	0.02 U	0.019 U	0.022 U	0.019 U	0.021 U	0.019 U	0.019 U	0.02 U	0.019 U	0.2 U	0.2 U
4-Bromophenyl phenyl ether	mg/L	0.0053 U	0.0052 U	0.0049 U	0.0048 U	0.0049 U	0.0049 U	0.0051 U	0.0049 U	0.0054 U	0.0048 U	0.0052 U	0.0048 U	0.0048 U	0.0049 U	0.0048 U	0.05 U	0.049 U
4-Chloro-3-methylphenol	mg/L	0.0053 U	0.0052 U	0.0049 U	0.0048 U	0.0049 U	0.0049 U	0.0051 U	0.0049 U	0.0054 U	0.0048 U	0.0052 U	0.0048 U	0.0048 U	0.0049 U	0.0048 U	0.05 U	0.049 U
4-Chloroaniline	mg/L	0.011 U	0.01 U	0.0097 U	0.0095 U	0.0098 U	0.0098 U	0.01 U	0.0097 U	0.011 U	0.0095 U	0.01 U	0.0096 U	0.0095 U	0.0098 U	0.0096 U	0.1 U	0.098 U
4-Chlorophenyl phenyl ether	mg/L	0.0053 U	0.0052 U	0.0049 U	0.0048 U	0.0049 U	0.0049 U	0.0051 U	0.0049 U	0.0054 U	0.0048 U	0.0052 U	0.0048 U	0.0048 U	0.0049 U	0.0048 U	0.05 U	0.049 U
4-Nitroaniline	mg/L	0.021 U	0.021 U	0.019 U	0.019 U	0.02 U	0.02 U	0.02 U	0.019 U	0.022 U	0.019 U	0.021 U	0.019 U	0.019 U	0.02 U	0.019 U	0.2 U	0.2 U
4-Nitrophenol	mg/L	0.021 U	0.021 U	0.019 U	0.019 U	0.02 U	0.02 U	0.02 U	0.019 U	0.022 U	0.019 U	0.021 U	0.019 U	0.019 U	0.02 U	0.019 U	0.2 U	0.2 U
Acenaphthene	mg/L	0.0053 U	0.0052 U	0.0049 U	0.0048 U	0.0049 U	0.0049 U	0.0051 U	0.0049 U	0.0054 U	0.0048 U	0.0052 U	0.0048 U	0.0048 U	0.0049 U	0.0048 U	0.05 U	0.049 U
Acenaphthylene	mg/L	0.0053 U	0.0052 U	0.0049 U	0.0048 U	0.0049 U	0.0049 U	0.0051 U	0.0049 U	0.0054 U	0.0048 U	0.0052 U	0.0048 U	0.0048 U	0.0049 U	0.0048 U	0.05 U	0.049 U
Acetophenone	mg/L	0.0053 U	0.0052 U	0.0049 U	0.0048 U	0.0049 U	0.0049 U	0.0051 U	0.0049 U	0.0054 U	0.0048 U	0.0052 U	0.0048 U	0.0048 U	0.0049 U	0.0048 U	0.05 U	0.049 U
Anthracene	mg/L	0.0053 U	0.0052 U	0.0049 U	0.0048 U	0.0049 U	0.0049 U	0.0051 U	0.0049 U	0.0054 U	0.0048 U	0.0052 U	0.0048 U	0.0048 U	0.0049 U	0.0048 U	0.05 U	0.049 U
Atrazine	mg/L	0.0032 U	0.0031 U	0.0029 U	0.0029 U	0.0029 U	0.0029 U	0.003 U	0.0029 U	0.0032 U	0.0029 U	0.0031 U	0.0029 U	0.0029 U	0.0029 U	0.0029 U	0.03 U	0.029 U
Benzaldehyde	mg/L	0.0053 U	0.0052 U	0.0049 U	0.0048 U	0.0049 U	0.0049 U	0.0051 U	0.0049 U	0.0054 U	0.0048 U	0.0052 U	0.0048 U	0.0048 U	0.0049 U	0.0048 U	0.05 U	0.049 U
Benzo(a)anthracene	mg/L	0.0011 U	0.001 U	0.00097 U	0.00095 U	0.00098 U	0.00098 U	0.001 U	0.00097 U	0.0011 U	0.00095 U	0.001 U	0.00096 U	0.00095 U	0.00098 U	0.00096 U	0.01 U	0.0098 U
Benzo(a)pyrene	mg/L	0.0011 U	0.001 U	0.00097 U	0.00095 U	0.00098 U	0.00098 U	0.001 U	0.00097 U	0.0011 U	0.00095 U	0.001 U	0.00096 U	0.00095 U	0.00098 U	0.00096 U	0.01 U	0.0098 U
Benzo(b)fluoranthene	mg/L	0.0011 U	0.001 U	0.00097 U	0.00095 U	0.00098 U	0.00098 U	0.001 U	0.00097 U	0.0011 U	0.00095 U	0.001 U	0.00096 U	0.00095 U	0.00098 U	0.00096 U	0.01 U	0.0098 U
Benzo(g,h,i)perylene	mg/L	0.0011 U	0.00025 J	0.00097 U	0.00095 U	0.00098 U	0.00098 U	0.001 U	0.00097 U	0.0011 U	0.00095 U	0.001 U	0.00096 U	0.00095 U	0.00098 U	0.00096 U	0.01 U	0.0098 U
Benzo(k)fluoranthene	mg/L	0.0011 U	0.001 U	0.00097 U	0.00095 U	0.00098 U	0.00098 U	0.001 U	0.00097 U	0.0011 U	0.00095 U	0.001 U	0.00096 U	0.00095 U	0.00098 U	0.00096 U	0.01 U	0.0098 U
Biphenyl (1,1-Biphenyl)	mg/L	0.0053 U	0.0052 U	0.0049 U	0.0048 U	0.0049 U	0.0049 U	0.0051 U	0.0049 U	0.0054 U	0.0048 U	0.0052 U	0.0048 U	0.0048 U	0.0049 U	0.0048 U	0.05 U	0.049 U
bis(2-Chloroethoxy)methane	mg/L	0.0053 U	0.0052 U	0.0049 U	0.0048 U	0.0049 U	0.0049 U	0.0051 U	0.0049 U	0.0054 U	0.0048 U	0.0052 U	0.0048 U	0.0048 U	0.0049 U	0.0048 U	0.05 U	0.049 U
bis(2-Chloroethyl)ether	mg/L	0.0011 U	0.001 U	0.00097 U	0.00095 U	0.00098 U	0.00098 U	0.001 U	0.00097 U	0.0011 U	0.00095 U	0.001 U	0.00096 U	0.00095 U	0.00098 U	0.00096 U	0.01 U	0.0098 U
bis(2-Ethylhexyl)phthalate (DEHP)	mg/L	0.0053 U	0.0052 U	0.0049 U	0.0048 U	0.0049 U	0.0049 U	0.0051 U	0.0009 J	0.0054 U	0.0048 U	0.0052 U	0.0048 U	0.0048 U	0.0049 U	0.0048 U	0.05 U	0.049 U
Butyl benzylphthalate (BBP)	mg/L	0.0053 U	0.0052 U	0.0049 U	0.0048 U	0.0049 U	0.0049 U	0.0051 U	0.0049 U	0.0054 U	0.0048 U	0.0052 U	0.0048 U	0.0048 U	0.0049 U	0.0048 U	0.05 U	0.049 U
Caprolactam	mg/L	0.011 U	0.01 U	0.0097 U	0.0095 U	0.0098 U	0.0098 U	0.01 U	0.0097 U	0.011 U	0.0095 U	0.01 U	0.0096 U	0.0095 U	0.0098 U	0.0096 U	0.1 U	0.098 U
Carbazole	mg/L	0.011 U	0.01 U	0.0097 U	0.0095 U	0.0098 U	0.0098 U	0.01 U	0.0097 U	0.011 U	0.0095 U	0.01 U	0.0096 U	0.0095 U	0.0098 U	0.0096 U	0.1 U	0.098 U
Chrysene	mg/L	0.0011 U	0.001 U	0.00097 U	0.00095 U	0.00098 U	0.00098 U	0.001 U	0.00097 U	0.0011 U	0.00095 U	0.001 U	0.00096 U	0.00095 U	0.00098 U	0.00096 U	0.01 U	0.0098 U
Dibenz(a,h)anthracene	mg/L	0.0021 U	0.0021 U	0.0019 U	0.0019 U	0.002 U	0.002 U	0.002 U	0.0019 U	0.0022 U	0.0019 U	0.0021 U	0.0019 U	0.0019 U	0.002 U	0.0019 U	0.02 U	0.02 U
Dibenzofuran	mg/L	0.0042 U	0.0042 U	0.0039 U	0.0038 U	0.0039 U	0.0039 U	0.004 U	0.0039 U	0.0043 U	0.0038 U	0.0042 U	0.0038 U	0.0038 U	0.0039 U	0.0038 U	0.04 U	0.039 U
Diethyl phthalate	mg/L	0.0053 U	0.0052 U	0.0049 U	0.0048 U	0.0049 U	0.0049 U	0.0051 U	0.0049 U	0.0054 U	0.0048 U	0.0052 U	0.0048 U	0.0048 U	0.0049 U	0.0048 U	0.05 U	0.049 U
Dimethyl phthalate	mg/L	0.0053 U	0.0052 U	0.0049 U	0.0048 U	0.0049 U	0.0049 U	0.0051 U	0.0049 U	0.0054 U	0.0048 U	0.0052 U	0.0048 U	0.0048 U	0.0049 U	0.0048 U	0.05 U	0.049 U
Di-n-butylphthalate (DBP)	mg/L	0.0053 U	0.0052 U	0.0049 U	0.0048 U	0.0049 U	0.0049 U	0.0051 U	0.0049 U	0.0054 U	0.0048 U	0.0052 U	0.0048 U	0.0048 U	0.0049 U	0.0048 U	0.05 U	0.049 U
Di-n-octyl phthalate (DnOP)	mg/L	0.0053 U	0.0052 U	0.0049 U	0.0048 U	0.0049 U	0.0049 U	0.0051 U	0.0049 U	0.0054 U	0.0048 U	0.0052 U	0.0048 U	0.0048 U	0.0049 U	0.0048 U	0.05 U	0.049 U
Fluoranthene	mg/L	0.0011 U	0.001 U	0.00097 U	0.00095 U	0.00098 U	0.00098 U	0.001 U	0.00097 U	0.0011 U	0.00095 U	0.001 U	0.00096 U	0.00095 U	0.00098 U	0.00096 U	0.01 U	0.0098 U
Fluorene	mg/L	0.0053 U	0.0052 U	0.0049 U	0.0048 U	0.0049 U	0.0049 U	0.0051 U	0.0049 U	0.0054 U	0.0048 U	0.0052 U	0.0048 U	0.0048 U	0.0049 U	0.0048 U	0.05 U	0.049 U
Hexachlorobenzene	mg/L	0.00021 U	0.00021 U	0.00019 U	0.00019 U	0.0002 U	0.0002 U	0.0002 U	0.00019 U	0.00022 U	0.00019 U	0.00021 U	0.00019 U	0.00019 U	0.0002 U	0.00019 U	0.002 U	0.002 U

TABLE 3.9

PART 201 CRITERIA EXCEEDANCES - GROUNDWATER
2013 RFI REPORT
FORMER GENRERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation		*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*EAST01*	*EAST01*	*EAST01*	*EAST01*
Aquifier		*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Lower Shallow*	*Lower Shallow*	*Shallow*	*Shallow*
Perimeter Status (1)		*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*N*	*N*
Sample Location		*CRA-745M*	*CRA-745M*	*CRA-749M*	*CRA-749M*	*CRA-750M*	*CRA-750M*	*CRA-750M*	*CRA-751M*	*CRA-751M*	*CRA-752M*	*CRA-752M*	*CRA-753M*	*CRA-753M*	*CRA-826ML*	*CRA-826ML*	*CRA-775M*	*CRA-775M*
Sample Identification (GW-17358-)		*040413-CT-022*	*040413-CT-023*	*041912-JY-1062*	*040413-CT-024*	*041712-JY-1031*	*041712-JY-1032*	*040413-CT-027*	*041712-JY-1033*	*040413-CT-028*	*041712-JY-1034*	*040413-CT-029*	*041712-JY-1035*	*040413-CT-030*	*041812-EM-1049*	*040213-CT-013*	*041113-EM-093*	*041113-EM-094*
Sample Date		*4/4/2013*	*4/4/2013*	*4/19/2012*	*4/4/2013*	*4/17/2012*	*4/17/2012*	*4/4/2013*	*4/17/2012*	*4/4/2013*	*4/17/2012*	*4/4/2013*	*4/17/2012*	*4/4/2013*	*4/18/2012*	*4/2/2013*	*4/11/2013*	*4/11/2013*
Sample Type			*Duplicate*				*Duplicate*											*Duplicate*
SVOCs Continued																		
Hexachlorobutadiene	mg/L	0.0011 U	0.001 U	0.00097 U	0.00095 U	0.00098 U	0.00098 U	0.001 U	0.00097 U	0.0011 U	0.00095 U	0.001 U	0.00096 U	0.00095 U	0.00098 U	0.00096 U	0.01 U	0.0098 U
Hexachlorocyclopentadiene	mg/L	0.0053 U	0.0052 U	0.0049 U	0.0048 U	0.0049 U	0.0049 U	0.0051 U	0.0049 U	0.0054 U	0.0048 U	0.0052 U	0.0048 U	0.0048 U	0.0049 U	0.0048 U	0.05 U	0.049 U
Hexachloroethane	mg/L	0.0053 U	0.0052 U	0.0049 U	0.0048 U	0.0049 U	0.0049 U	0.0051 U	0.0049 U	0.0054 U	0.0048 U	0.0052 U	0.0048 U	0.0048 U	0.0049 U	0.0048 U	0.05 U	0.049 U
Indeno(1,2,3-cd)pyrene	mg/L	0.0021 U	0.0021 U	0.0019 U	0.0019 U	0.002 U	0.002 U	0.002 U	0.0019 U	0.0022 U	0.0019 U	0.0021 U	0.0019 U	0.0019 U	0.002 U	0.0019 U	0.02 U	0.02 U
Isophorone	mg/L	0.0053 U	0.0052 U	0.0049 U	0.0048 U	0.0049 U	0.0049 U	0.0051 U	0.0049 U	0.0054 U	0.0048 U	0.0052 U	0.0048 U	0.0048 U	0.0049 U	0.0048 U	0.05 U	0.049 U
Naphthalene	mg/L	0.0053 U	0.0052 U	0.0049 U	0.0048 U	0.0049 U	0.0049 U	0.0051 U	0.0049 U	0.0054 U	0.0048 U	0.0052 U	0.0048 U	0.0048 U	0.0049 U	0.0048 U	0.05 U	0.049 U
Nitrobenzene	mg/L	0.0032 U	0.0031 U	0.0029 U	0.0029 U	0.0029 U	0.0029 U	0.003 U	0.0029 U	0.0032 U	0.0029 U	0.0031 U	0.0029 U	0.0029 U	0.0029 U	0.0029 U	0.03 U	0.029 U
N-Nitrosodi-n-propylamine	mg/L	0.0053 U	0.0052 U	0.0049 U	0.0048 U	0.0049 U	0.0049 U	0.0051 U	0.0049 U	0.0054 U	0.0048 U	0.0052 U	0.0048 U	0.0048 U	0.0049 U	0.0048 U	0.05 U	0.049 U
N-Nitrosodiphenylamine	mg/L	0.0053 U	0.0052 U	0.0049 U	0.0048 U	0.0049 U	0.0049 U	0.0051 U	0.0049 U	0.0054 U	0.0048 U	0.0052 U	0.0048 U	0.0048 U	0.0049 U	0.0048 U	0.05 U	0.049 U
Pentachlorophenol	mg/L	0.0053 U	0.0052 U	0.0049 U	0.0048 U	0.0049 U	0.0049 U	0.0051 U	0.0049 U	0.0054 U	0.0048 U	0.0052 U	0.0048 U	0.0048 U	0.0049 U	0.0048 U	0.05 U	0.049 U
Phenanthrene	mg/L	0.0021 U	0.0021 U	0.0019 U	0.0019 U	0.002 U	0.002 U	0.002 U	0.0019 U	0.0022 U	0.0019 U	0.0021 U	0.0019 U	0.0019 U	0.002 U	0.0019 U	0.02 U	0.02 U
Phenol	mg/L	0.0053 U	0.0052 U	0.0049 U	0.0048 U	0.0049 U	0.0049 U	0.0051 U	0.0049 U	0.0054 U	0.0048 U	0.0052 U	0.0048 U	0.0048 U	0.0049 U	0.0048 U	0.05 U	0.049 U
Pyrene	mg/L	0.0053 U	0.0052 U	0.0049 U	0.0048 U	0.0049 U	0.0049 U	0.0051 U	0.0049 U	0.0054 U	0.0048 U	0.0052 U	0.0048 U	0.0048 U	0.0049 U	0.0048 U	0.05 U	0.049 U
Metals																		
Aluminum	mg/L	0.05 U	0.05 U	0.05 U	0.023 J	0.05 U	0.05 U	**0.12[ab]**	**0.19[ab]**	**0.15[ab]**	0.05	0.039 J	0.05 U	0.05 U	0.035 J	0.028 J	0.05 U	0.05 U
Aluminum (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Antimony	mg/L	0.002 U	0.002 U	0.00017 J	0.002 U	0.00034	0.00019	0.002 U	0.00014 J	0.002 U	0.00026 J	0.002 U	0.00019 J	0.002 U	0.00022 J	0.002 U	0.002 U	0.002 U
Antimony (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Arsenic	mg/L	0.005 U	0.005 U	0.00059 J	0.005 U	0.0023 J	0.0021 J	0.00041 J	0.0012 J	0.00078 J	0.0018 J	0.00099 J	0.0029 J	0.01	0.0052	0.0049 J	**0.022[bc]**	**0.022[bc]**
Arsenic (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Barium	mg/L	0.031 J	0.03 J	0.054 J	0.047 J	0.029 J	0.028 J	0.02 J	0.037 J	0.029 J	0.084 J	0.07 J	0.055 J	0.05 J	0.17	0.081 J	0.51	0.52
Barium (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Beryllium	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.00026 J	0.001 U	0.001 U	0.001 U	0.00036 J	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Beryllium (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cadmium	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.00013 J	0.00014 J	0.001 U	0.001 U	0.00042 J	0.001 U	0.00019 J	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Cadmium (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Calcium	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chromium	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.00095 J	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.00083 J	0.00087 J
Chromium (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chromium III (trivalent)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chromium VI (hexavalent)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cobalt	mg/L	0.0032 J	0.0029 J	0.00053 J	0.02 U	0.0014 J	0.0014 J	0.0011 J	0.0019 J	0.0026 J	0.0019 J	0.00082 J	0.00078 J	0.00036 J	0.0003 J	0.02 U	0.0016 J	0.0016 J
Cobalt (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Copper	mg/L	0.004 U	0.004 U	0.0011 J	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.0013 J	0.004 U	0.00054 J	0.004 U	0.0004 J	0.004 U	0.00056 J	0.004 U	0.004 U
Copper (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Iron	mg/L	**4.6[ab]**	**4.5[ab]**	0.2 U	0.2 U	0.2 U	0.2 U	0.062 J	0.19 J	0.2 U	0.097 J	0.068 J	0.2 U	0.082 J	**0.92[ab]**	**1.3[ab]**	**15[b]**	**14[b]**
Iron (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lead	mg/L	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.00023 J	0.00019 J	0.00064 J	0.003 U	0.00028 J	0.003 U	0.003 U	0.003 U	0.0002 J	0.00036 J	0.00048 J
Lead (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Magnesium	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Manganese	mg/L	**1.6[ab]**	**1.5[ab]**	**0.086[ab]**	0.0049 J	**0.52[ab]**	**0.51[ab]**	**0.55[ab]**	**0.87[ab]**	**1.4[ab]**	**0.58[ab]**	**0.35[ab]**	**0.21[ab]**	**0.22[ab]**	**0.35[ab]**	**0.19[ab]**	**0.61[b]**	**0.61[b]**
Manganese (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mercury	mg/L	0.0002 U	**0.00028[c]**	0.04 U	0.0002 U	0.04 U	0.04 U	0.0002 U	0.04 U	0.0002 U	0.04 U	0.0002 U	0.04 U	0.0002 U	0.04 U	0.0002 U	0.0002 U	0.0002 U
Mercury (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nickel	mg/L	0.0026 J	0.0023 J	0.0015 J	0.001 J	0.0071 J	0.0067 J	0.0044 J	0.0051 J	0.0081 J	0.0049 J	0.0033 J	0.0038 J	0.0014 J	0.00087 J	0.00034 J	0.0033 J	0.0037 J
Nickel (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Potassium	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Selenium	mg/L	0.0019 J	0.0015 J	0.0017 J	0.005	0.0014 J	0.0013 J	0.00092 J	0.005 U	0.0012 J	0.00088 J	0.0017 J	0.005 U	0.005 U	0.005 U	0.005 U	0.0011 J	0.0011 J
Selenium (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Silver	mg/L	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Silver (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sodium	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

TABLE 3.9

PART 201 CRITERIA EXCEEDANCES - GROUNDWATER
2013 RFI REPORT
FORMER GENRERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation		*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*EAST01*	*EAST01*	*EAST01*	*EAST01*
Aquifier		*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Lower Shallow*	*Lower Shallow*	*Shallow*	*Shallow*
Perimeter Status (1)		*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*N*	*N*
Sample Location		*CRA-745M*	*CRA-745M*	*CRA-749M*	*CRA-749M*	*CRA-750M*	*CRA-750M*	*CRA-750M*	*CRA-751M*	*CRA-751M*	*CRA-752M*	*CRA-752M*	*CRA-753M*	*CRA-753M*	*CRA-826ML*	*CRA-826ML*	*CRA-775M*	*CRA-775M*
Sample Identification (GW-17358-)		*040413-CT-022*	*040413-CT-023*	*041912-JY-1062*	*040413-CT-024*	*041712-JY-1031*	*041712-JY-1032*	*040413-CT-027*	*041712-JY-1033*	*040413-CT-028*	*041712-JY-1034*	*040413-CT-029*	*041712-JY-1035*	*040413-CT-030*	*041812-EM-1049*	*040213-CT-013*	*041113-EM-093*	*041113-EM-094*
Sample Date		*4/4/2013*	*4/4/2013*	*4/19/2012*	*4/4/2013*	*4/17/2012*	*4/17/2012*	*4/4/2013*	*4/17/2012*	*4/4/2013*	*4/17/2012*	*4/4/2013*	*4/17/2012*	*4/4/2013*	*4/18/2012*	*4/2/2013*	*4/11/2013*	*4/11/2013*
Sample Type			*Duplicate*				*Duplicate*											*Duplicate*
Metals Continued																		
Thallium	mg/L	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.0014 J	0.002 U	0.0006 J	0.002 U	0.0003 J	0.002 U	0.002 U	0.002 U	0.002 U
Thallium (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Vanadium	mg/L	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.00055 J	0.00066 J	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.00067 J	0.00055 J	0.00048 J
Vanadium (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Zinc	mg/L	0.05 U	0.05 U	0.0025 J	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Zinc (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Polychlorinated Biphenyls (PCBs)																		
Aroclor-1016 (PCB-1016)	mg/L	0.00011 U	0.0001 U	0.000095 U	0.000095 U	0.000098 U	0.000095 U	0.000099 U	0.000099 U	0.000095 U	0.000095 U	0.0001 U	0.000098 U	0.000095 U	0.0001 U	0.000095 U	0.0001 U	0.000099 U
Aroclor-1221 (PCB-1221)	mg/L	0.00011 U	0.0001 U	0.000095 U	0.000095 U	0.000098 U	0.000095 U	0.000099 U	0.000099 U	0.000095 U	0.000095 U	0.0001 U	0.000098 U	0.000095 U	0.0001 U	0.000095 U	0.0001 U	0.000099 U
Aroclor-1232 (PCB-1232)	mg/L	0.00011 U	0.0001 U	0.000095 U	0.000095 U	0.000098 U	0.000095 U	0.000099 U	0.000099 U	0.000095 U	0.000095 U	0.0001 U	0.000098 U	0.000095 U	0.0001 U	0.000095 U	0.0001 U	0.000099 U
Aroclor-1242 (PCB-1242)	mg/L	0.00011 U	0.0001 U	0.000095 U	0.000095 U	0.000098 U	0.000095 U	0.000099 U	0.000099 U	0.000095 U	0.000095 U	0.0001 U	0.000098 U	0.000095 U	0.0001 U	0.000095 U	0.0001 U	0.000099 U
Aroclor-1248 (PCB-1248)	mg/L	0.00011 U	0.0001 U	0.000095 U	0.000095 U	0.000098 U	0.000095 U	0.000099 U	0.000099 U	0.000095 U	0.000095 U	0.0001 U	0.000098 U	0.000095 U	0.0001 U	0.000095 U	0.0001 U	0.000099 U
Aroclor-1254 (PCB-1254)	mg/L	0.00011 U	0.0001 U	0.000095 U	0.000095 U	0.000098 U	0.000095 U	0.000099 U	0.000099 U	0.000095 U	0.000095 U	0.0001 U	0.000098 U	0.000095 U	0.0001 U	0.000095 U	0.0001 U	0.000099 U
Aroclor-1260 (PCB-1260)	mg/L	0.00011 U	0.0001 U	0.000095 UJ	0.000095 U	0.000098 U	0.000095 U	0.000099 U	0.000099 U	0.000095 U	0.000095 U	0.0001 U	0.000098 U	0.000095 U	0.0001 U	0.000095 U	0.0001 U	0.000099 U
Aroclor-1262 (PCB-1262)	mg/L	0.00011 U	0.0001 U	0.000095 U	0.000095 U	0.000098 U	0.000095 U	0.000099 U	0.000099 U	0.000095 U	0.000095 U	0.0001 U	0.000098 U	0.000095 U	0.0001 U	0.000095 U	0.0001 U	0.000099 U
Aroclor-1268 (PCB-1268)	mg/L	0.00011 U	0.0001 U	0.000095 U	0.000095 U	0.000098 U	0.000095 U	0.000099 U	0.000099 U	0.000095 U	0.000095 U	0.0001 U	0.000098 U	0.000095 U	0.0001 U	0.000095 U	0.0001 U	0.000099 U
Total PCBs	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
General Chemistry																		
Cyanide (amenable)	mg/L	0.005 U	0.005 U	0.01 U	0.005 U	0.01 U	0.01 U	0.005 U	0.01 U	0.005 U	-	-	0.01 U	0.005 U	-	-	-	-
Phosphorus	mg/L	0.1 U	0.1 U	-	-	-	-	-	-	-	-	-	-	-	-	-	0.29	0.27
Field Parameters																		
Turbidity, field	NTU	0.70	0.70	2.31	1.91	4.91	4.91	3.98	9.11	18	4.46	3.17	1.64	0.74	1.14	4.79	15.6	15.6

Notes
Michigan Part 201 generic clean up criteria (updated September 28, 2012)
ID - Insufficient data to develop criterion
NLV - Hazardous substance is not likely to volatilize under most conditions
NA - Criterion or value is not available

Perimeter Status (1) - N - non-perimeter, Y - perimeter
mg/L - miligram per liter
NTU - Nephelometric Turbidity Unit

Notes:
U - Not detected at the associated reporting limit.
J - Estimated concentration.
UJ - Not detected; associated reporting limit is estimated.

TABLE 3.9

PART 201 CRITERIA EXCEEDANCES - GROUNDWATER
2013 RFI REPORT
FORMER GENRERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation		*EAST01*	*EAST01*	*EAST01*	*EAST01*	*EAST01*	*EAST01*	*EAST01*	*EAST01*	*EAST01*	*EAST01*	*EAST01*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*
Aquifer		*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Deep*	*Deep*	*Deep*	*Intermediate*	*Intermediate*
Perimeter Status (1)		*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*
Sample Location		*CRA-209M*	*CRA-209M*	*CRA-320M*	*CRA-320M*	*CRA-342M*	*CRA-342M*	*CRA-828M*	*CRA-828M*	*CRA-828M*	*CRA-829M*	*CRA-829M*	*CRA-829M*	*CRA-785D*	*CRA-785D*	*CRA-785D*	*CRA-712I*	*CRA-712I*
Sample Identification (GW-17358-)		*041712-DR-1046*	*040213-CT-010*	*041712-DR-1045*	*040213-CT-012*	*041712-DR-1047*	*040213-CT-011*	*012312-DR-023*	*020712-SK-036*	*040213-CT-008*	*012312-DR-024*	*020712-SK-037*	*040213-CT-009*	*042312-CB-1080*	*041013-JY-077*	*041113-DR-086*	*041912-DR-1057*	*040813-JY-046*
Sample Date		*4/17/2012*	*4/2/2013*	*4/17/2012*	*4/2/2013*	*4/17/2012*	*4/2/2013*	*1/23/2012*	*2/7/2012*	*4/2/2013*	*1/23/2012*	*2/7/2012*	*4/2/2013*	*4/23/2012*	*4/10/2013*	*4/11/2013*	*4/19/2012*	*4/8/2013*
Sample Type																		
Volatile Organic Compounds (VOCs)	***Units***																	
1,1,1-Trichloroethane	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	-	0.001 U	0.001 U	-	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,1,2,2-Tetrachloroethane	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	-	0.001 U	0.001 U	-	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,1,2-Trichloroethane	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	-	0.001 U	0.001 U	-	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,1-Dichloroethane	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	-	0.001 U	0.001 U	-	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,1-Dichloroethene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	-	0.001 U	0.001 U	-	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,2,4-Trichlorobenzene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	-	0.001 U	0.001 U	-	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,2-Dibromo-3-chloropropane (DBCP)	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	-	0.001 U	0.001 U	-	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,2-Dibromoethane (Ethylene dibromide)	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	-	0.001 U	0.001 U	-	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,2-Dichlorobenzene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	-	0.001 U	0.001 U	-	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,2-Dichloroethane	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	-	0.001 U	0.001 U	-	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,2-Dichloropropane	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	-	0.001 U	0.001 U	-	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,3-Dichlorobenzene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	-	0.001 U	0.001 U	-	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,4-Dichlorobenzene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	-	0.001 U	0.001 U	-	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
2-Butanone (Methyl ethyl ketone) (MEK)	mg/L	0.0017 J	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	-	0.01 U	0.01 U	-	0.01 U	0.00059 J	0.01 U	0.01 U	0.01 U	0.01 U
2-Hexanone	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	-	0.01 U	0.01 U	-	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	-	0.01 U	0.01 U	-	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Acetone	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	-	0.01 U	0.01 U	-	0.01 U	0.01 U	0.01 U	0.0014 J	0.01 U	0.01 U
Benzene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	-	0.001 U	0.001 U	-	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Bromodichloromethane	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	-	0.001 U	0.001 U	-	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Bromoform	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	-	0.001 U	0.001 U	-	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Bromomethane (Methyl bromide)	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	-	0.001 U	0.001 U	-	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Carbon disulfide	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	-	0.005 U	0.005 U	-	0.005 U	0.00052 J	0.0012 J	0.0011 J	0.005 U	0.005 U
Carbon tetrachloride	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	-	0.001 U	0.001 U	-	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Chlorobenzene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	-	0.001 U	0.001 U	-	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Chloroethane	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	-	0.001 U	0.001 U	-	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Chloroform (Trichloromethane)	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	-	0.001 U	0.001 U	-	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Chloromethane (Methyl chloride)	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	-	0.001 U	0.001 U	-	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
cis-1,2-Dichloroethene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	-	0.001 U	0.001 U	-	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
cis-1,3-Dichloropropene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	-	0.001 U	0.001 U	-	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Cyclohexane	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	-	0.001 U	0.001 U	-	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Dibromochloromethane	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	-	0.001 U	0.001 U	-	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Dichlorodifluoromethane (CFC-12)	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	-	0.001 U	0.001 U	-	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Ethylbenzene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	-	0.001 U	0.001 U	-	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Isopropyl benzene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	-	0.001 U	0.001 U	-	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Methyl acetate	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	-	0.01 U	0.01 U	-	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Methyl cyclohexane	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	-	0.001 U	0.001 U	-	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Methyl tert butyl ether (MTBE)	mg/L	0.005 U	0.001 U	0.005 U	0.001 U	0.005 U	0.001 U	0.005 U	-	0.001 U	0.005 U	-	0.001 U	0.005 U	0.001 U	0.001 U	0.005 U	0.001 U
Methylene chloride	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	-	0.005 U	0.005 U	-	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Styrene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	-	0.001 U	0.001 U	-	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Tetrachloroethene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	-	0.001 U	0.001 U	-	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Toluene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	-	0.001 U	0.001 U	-	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
trans-1,2-Dichloroethene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	-	0.001 U	0.001 U	-	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
trans-1,3-Dichloropropene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	-	0.001 U	0.001 U	-	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Trichloroethene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	-	0.001 U	0.001 U	-	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Trichlorofluoromethane (CFC-11)	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	-	0.001 U	0.001 U	-	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Trifluorotrichloroethane (Freon 113)	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	-	0.001 U	0.001 U	-	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Vinyl chloride	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	-	0.001 U	0.001 U	-	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Xylenes (total)	mg/L	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	-	0.002 U	0.002 U	-	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U

TABLE 3.9

PART 201 CRITERIA EXCEEDANCES - GROUNDWATER
2013 RFI REPORT
FORMER GENRERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation		*EAST01*	*EAST01*	*EAST01*	*EAST01*	*EAST01*	*EAST01*	*EAST01*	*EAST01*	*EAST01*	*EAST01*	*EAST01*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*
Aquifer		*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Deep*	*Deep*	*Deep*	*Intermediate*	*Intermediate*
Perimeter Status (1)		*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*
Sample Location		*CRA-209M*	*CRA-209M*	*CRA-320M*	*CRA-320M*	*CRA-342M*	*CRA-342M*	*CRA-828M*	*CRA-828M*	*CRA-828M*	*CRA-829M*	*CRA-829M*	*CRA-829M*	*CRA-785D*	*CRA-785D*	*CRA-785D*	*CRA-712I*	*CRA-712I*
Sample Identification (GW-17358-)		*041712-DR-1046*	*040213-CT-010*	*041712-DR-1045*	*040213-CT-012*	*041712-DR-1047*	*040213-CT-011*	*012312-DR-023*	*020712-SK-036*	*040213-CT-008*	*012312-DR-024*	*020712-SK-037*	*040213-CT-009*	*042312-CB-1080*	*041013-JY-077*	*041113-DR-086*	*041912-DR-1057*	*040813-JY-046*
Sample Date		*4/17/2012*	*4/2/2013*	*4/17/2012*	*4/2/2013*	*4/17/2012*	*4/2/2013*	*1/23/2012*	*2/7/2012*	*4/2/2013*	*1/23/2012*	*2/7/2012*	*4/2/2013*	*4/23/2012*	*4/10/2013*	*4/11/2013*	*4/19/2012*	*4/8/2013*
Sample Type																		
Semi-Volatile Organic Compounds (SVOCs)																		
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	mg/L	0.0049 U	0.0049 U	0.005 U	0.0048 U	0.005 U	0.0048 U	0.0051 U	-	0.0048 U	0.0052 U	-	0.0048 U	0.0052 U	0.0048 U	0.0054 U	0.005 U	0.0048 U
2,4,5-Trichlorophenol	mg/L	0.0049 U	0.0049 U	0.005 U	0.0048 U	0.005 U	0.0048 U	0.0051 U	-	0.0048 U	0.0052 U	-	0.0048 U	0.0052 U	0.0048 U	0.0054 U	0.005 U	0.0048 U
2,4,6-Trichlorophenol	mg/L	0.0039 U	0.0039 U	0.004 U	0.0038 U	0.004 U	0.0038 U	0.0041 U	-	0.0038 U	0.0041 U	-	0.0038 U	0.0041 U	0.0038 U	0.0043 U	0.004 U	0.0038 U
2,4-Dichlorophenol	mg/L	0.0098 U	0.0097 U	0.01 U	0.0096 U	0.0099 U	0.0095 U	0.01 U	-	0.0095 U	0.01 U	-	0.0095 U	0.01 U	0.0096 U	0.011 U	0.0099 U	0.0095 U
2,4-Dimethylphenol	mg/L	0.0049 U	0.0049 U	0.005 U	0.0048 U	0.005 U	0.0048 U	0.0051 U	-	0.0048 U	0.0052 U	-	0.0048 U	0.0052 U	0.0048 U	0.0054 U	0.005 U	0.0048 U
2,4-Dinitrophenol	mg/L	0.02 U	0.019 U	0.02 U	0.019 U	0.02 U	0.019 U	0.02 U	-	0.019 U	0.021 U	-	0.019 U	0.021 U	0.019 U	0.022 U	0.02 U	0.019 U
2,4-Dinitrotoluene	mg/L	0.0049 U	0.0049 U	0.005 U	0.0048 U	0.005 U	0.0048 U	0.0051 U	-	0.0048 U	0.0052 U	-	0.0048 U	0.0052 U	0.0048 U	0.0054 U	0.005 U	0.0048 U
2,6-Dinitrotoluene	mg/L	0.0049 U	0.0049 U	0.005 U	0.0048 U	0.005 U	0.0048 U	0.0051 U	-	0.0048 U	0.0052 U	-	0.0048 U	0.0052 U	0.0048 U	0.0054 U	0.005 U	0.0048 U
2-Chloronaphthalene	mg/L	0.0049 U	0.0049 U	0.005 U	0.0048 U	0.005 U	0.0048 U	0.0051 U	-	0.0048 U	0.0052 U	-	0.0048 U	0.0052 U	0.0048 U	0.0054 U	0.005 U	0.0048 U
2-Chlorophenol	mg/L	0.0049 U	0.0049 U	0.005 U	0.0048 U	0.005 U	0.0048 U	0.0051 U	-	0.0048 U	0.0052 U	-	0.0048 U	0.0052 U	0.0048 U	0.0054 U	0.005 U	0.0048 U
2-Methylnaphthalene	mg/L	0.0049 U	0.0049 U	0.005 U	0.0048 U	0.005 U	0.0048 U	0.0051 U	-	0.0048 U	0.0052 U	-	0.0048 U	0.0052 U	0.0048 U	0.0054 U	0.005 U	0.0048 U
2-Methylphenol	mg/L	0.0049 U	0.0049 U	0.005 U	0.0048 U	0.005 U	0.0048 U	0.0051 U	-	0.0048 U	0.0052 U	-	0.0048 U	0.0052 U	0.0048 U	0.0054 U	0.005 U	0.0048 U
2-Nitroaniline	mg/L	0.02 U	0.019 U	0.02 U	0.019 U	0.02 U	0.019 U	0.02 U	-	0.019 U	0.021 U	-	0.019 U	0.021 U	0.019 U	0.022 U	0.02 U	0.019 U
2-Nitrophenol	mg/L	0.0049 U	0.0049 U	0.005 U	0.0048 U	0.005 U	0.0048 U	0.0051 U	-	0.0048 U	0.0052 U	-	0.0048 U	0.0052 U	0.0048 U	0.0054 U	0.005 U	0.0048 U
3&4-Methylphenol	mg/L	0.0049 U	0.0049 U	0.005 U	0.0048 U	0.005 U	0.0048 U	0.0051 U	-	0.0048 U	0.0052 U	-	0.0048 U	0.0052 U	0.0048 U	0.0054 U	0.005 U	0.0048 U
3,3'-Dichlorobenzidine	mg/L	0.00098 U	0.00097 U	0.001 U	0.00096 U	0.00099 U	0.00095 U	0.001 U	-	0.00095 U	0.001 U	-	0.00095 U	0.001 U	0.00096 U	0.0011 U	0.00099 U	0.00095 U
3-Nitroaniline	mg/L	0.02 U	0.019 U	0.02 U	0.019 U	0.02 U	0.019 U	0.02 U	-	0.019 U	0.021 U	-	0.019 U	0.021 U	0.019 U	0.022 U	0.02 U	0.019 U
4,6-Dinitro-2-methylphenol	mg/L	0.02 U	0.019 U	0.02 U	0.019 U	0.02 U	0.019 U	0.02 U	-	0.019 U	0.021 U	-	0.019 U	0.021 U	0.019 U	0.022 U	0.02 U	0.019 U
4-Bromophenyl phenyl ether	mg/L	0.0049 U	0.0049 U	0.005 U	0.0048 U	0.005 U	0.0048 U	0.0051 U	-	0.0048 U	0.0052 U	-	0.0048 U	0.0052 U	0.0048 U	0.0054 U	0.005 U	0.0048 U
4-Chloro-3-methylphenol	mg/L	0.0049 U	0.0049 U	0.005 U	0.0048 U	0.005 U	0.0048 U	0.0051 U	-	0.0048 U	0.0052 U	-	0.0048 U	0.0052 U	0.0048 U	0.0054 U	0.005 U	0.0048 U
4-Chloroaniline	mg/L	0.0098 U	0.0097 U	0.01 U	0.0096 U	0.0099 U	0.0095 U	0.01 U	-	0.0095 U	0.01 U	-	0.0095 U	0.01 U	0.0096 U	0.011 U	0.0099 U	0.0095 U
4-Chlorophenyl phenyl ether	mg/L	0.0049 U	0.0049 U	0.005 U	0.0048 U	0.005 U	0.0048 U	0.0051 U	-	0.0048 U	0.0052 U	-	0.0048 U	0.0052 U	0.0048 U	0.0054 U	0.005 U	0.0048 U
4-Nitroaniline	mg/L	0.02 U	0.019 U	0.02 U	0.019 U	0.02 U	0.019 U	0.02 U	-	0.019 U	0.021 U	-	0.019 U	0.021 U	0.019 U	0.022 U	0.02 U	0.019 U
4-Nitrophenol	mg/L	0.02 U	0.019 U	0.02 U	0.019 U	0.02 U	0.019 U	0.02 U	-	0.019 U	0.021 U	-	0.019 U	0.021 U	0.019 U	0.022 U	0.02 U	0.019 U
Acenaphthene	mg/L	0.0049 U	0.0049 U	0.005 U	0.0048 U	0.005 U	0.0048 U	0.0051 U	-	0.0048 U	0.0052 U	-	0.0048 U	0.0052 U	0.0048 U	0.0054 U	0.005 U	0.0048 U
Acenaphthylene	mg/L	0.0049 U	0.0049 U	0.005 U	0.0048 U	0.005 U	0.0048 U	0.0051 U	-	0.0048 U	0.0052 U	-	0.0048 U	0.0052 U	0.0048 U	0.0054 U	0.005 U	0.0048 U
Acetophenone	mg/L	0.0049 U	0.0049 U	0.005 U	0.0048 U	0.005 U	0.0048 U	0.0051 U	-	0.0048 U	0.0052 U	-	0.0048 U	0.0052 U	0.0048 U	0.0054 U	0.005 U	0.0048 U
Anthracene	mg/L	0.0049 U	0.0049 U	0.005 U	0.0048 U	0.005 U	0.0048 U	0.0051 U	-	0.0048 U	0.0052 U	-	0.0048 U	0.0052 U	0.0048 U	0.0054 U	0.005 U	0.0048 U
Atrazine	mg/L	0.0029 U	0.0029 U	0.003 U	0.0029 U	0.003 U	0.0029 U	0.0031 U	-	0.0029 U	0.0031 U	-	0.0029 U	0.0031 U	0.0029 U	0.0032 U	0.003 U	0.0029 U
Benzaldehyde	mg/L	0.0049 U	0.0049 U	0.005 U	0.0048 U	0.005 U	0.0048 U	0.0051 U	-	0.0048 U	0.0052 U	-	0.0048 U	0.0052 U	0.0048 U	0.0054 U	0.005 U	0.0048 U
Benzo(a)anthracene	mg/L	0.00098 U	0.00097 U	0.001 U	0.00096 U	0.00099 U	0.00095 U	0.001 U	-	0.00095 U	0.001 U	-	0.00095 U	0.001 U	0.00096 U	0.0011 U	0.00099 U	0.00095 U
Benzo(a)pyrene	mg/L	0.00098 U	0.00097 U	0.001 U	0.00096 U	0.00099 U	0.00095 U	0.001 U	-	0.00095 U	0.001 U	-	0.00095 U	0.001 U	0.00096 U	0.0011 U	0.00099 U	0.00095 U
Benzo(b)fluoranthene	mg/L	0.00098 U	0.00097 U	0.001 U	0.00096 U	0.00099 U	0.00095 U	0.001 U	-	0.00095 U	0.001 U	-	0.00095 U	0.001 U	0.00096 U	0.0011 U	0.00099 U	0.00095 U
Benzo(g,h,i)perylene	mg/L	0.00098 U	0.00097 U	0.001 U	0.00096 U	0.00099 U	0.00095 U	0.001 U	-	0.00095 U	0.001 U	-	0.00095 U	0.001 U	0.00096 U	0.0011 U	0.00099 U	0.00095 U
Benzo(k)fluoranthene	mg/L	0.00098 U	0.00097 U	0.001 U	0.00096 U	0.00099 U	0.00095 U	0.001 U	-	0.00095 U	0.001 U	-	0.00095 U	0.001 U	0.00096 U	0.0011 U	0.00099 U	0.00095 U
Biphenyl (1,1-Biphenyl)	mg/L	0.0049 U	0.0049 U	0.005 U	0.0048 U	0.005 U	0.0048 U	0.0051 U	-	0.0048 U	0.0052 U	-	0.0048 U	0.0052 U	0.0048 U	0.0054 U	0.005 U	0.0048 U
bis(2-Chloroethoxy)methane	mg/L	0.0049 U	0.0049 U	0.005 U	0.0048 U	0.005 U	0.0048 U	0.0051 U	-	0.0048 U	0.0052 U	-	0.0048 U	0.0052 U	0.0048 U	0.0054 U	0.005 U	0.0048 U
bis(2-Chloroethyl)ether	mg/L	0.00098 U	0.00097 U	0.001 U	0.00096 U	0.00099 U	0.00095 U	0.001 U	-	0.00095 U	0.001 U	-	0.00095 U	0.001 U	0.00096 U	0.0011 U	0.00099 U	0.00095 U
bis(2-Ethylhexyl)phthalate (DEHP)	mg/L	0.0011 J	0.0049 U	0.001 J	0.0048 U	0.005 U	0.0048 U	0.0051 U	-	0.0048 U	0.0052 U	-	0.0048 U	0.0052 U	0.0048 U	0.0054 U	0.005 U	0.0048 U
Butyl benzylphthalate (BBP)	mg/L	0.0049 U	0.0049 U	0.005 U	0.0048 U	0.005 U	0.0048 U	0.0051 U	-	0.0048 U	0.0052 U	-	0.0048 U	0.0052 U	0.0048 U	0.0054 U	0.005 U	0.00092 J
Caprolactam	mg/L	0.0098 U	0.0097 U	0.01 U	0.0096 U	0.0099 U	0.0095 U	0.01 U	-	0.0095 U	0.01 U	-	0.0095 U	0.01 U	0.0096 U	0.00099 J	0.0099 U	0.0095 U
Carbazole	mg/L	0.0098 U	0.0097 U	0.01 U	0.0096 U	0.0099 U	0.0095 U	0.01 U	-	0.0095 U	0.01 U	-	0.0095 U	0.01 U	0.0096 U	0.011 U	0.0099 U	0.0095 U
Chrysene	mg/L	0.00098 U	0.00097 U	0.001 U	0.00096 U	0.00099 U	0.00095 U	0.001 U	-	0.00095 U	0.001 U	-	0.00095 U	0.001 U	0.00096 U	0.0011 U	0.00099 U	0.00095 U
Dibenz(a,h)anthracene	mg/L	0.002 U	0.0019 U	0.002 U	0.0019 U	0.002 U	0.0019 U	0.002 U	-	0.0019 U	0.0021 U	-	0.0019 U	0.0021 U	0.0019 U	0.0022 U	0.002 U	0.0019 U
Dibenzofuran	mg/L	0.0039 U	0.0039 U	0.004 U	0.0038 U	0.004 U	0.0038 U	0.0041 U	-	0.0038 U	0.0041 U	-	0.0038 U	0.0041 U	0.0038 U	0.0043 U	0.004 U	0.0038 U
Diethyl phthalate	mg/L	0.0049 U	0.0049 U	0.005 U	0.0048 U	0.005 U	0.0048 U	0.0051 U	-	0.0048 U	0.0052 U	-	0.0048 U	0.0052 U	0.0048 U	0.0054 U	0.005 U	0.0048 U
Dimethyl phthalate	mg/L	0.0049 U	0.0049 U	0.005 U	0.0048 U	0.005 U	0.0048 U	0.0051 U	-	0.0048 U	0.0052 U	-	0.0048 U	0.0052 U	0.0048 U	0.0054 U	0.005 U	0.0048 U
Di-n-butylphthalate (DBP)	mg/L	0.0049 U	0.0049 U	0.005 U	0.0048 U	0.005 U	0.0048 U	0.0051 U	-	0.0048 U	0.0052 U	-	0.0048 U	0.0052 U	0.0048 U	0.0054 U	0.005 U	0.0048 U
Di-n-octyl phthalate (DnOP)	mg/L	0.0049 U	0.0049 U	0.005 U	0.0048 U	0.005 U	0.0048 U	0.0051 U	-	0.0048 U	0.0052 U	-	0.0048 U	0.0052 U	0.0048 U	0.0054 U	0.005 U	0.0048 U
Fluoranthene	mg/L	0.00098 U	0.00097 U	0.001 U	0.00096 U	0.00099 U	0.00095 U	0.001 U	-	0.00095 U	0.001 U	-	0.00095 U	0.001 U	0.00096 U	0.0011 U	0.00099 U	0.00095 U
Fluorene	mg/L	0.0049 U	0.0049 U	0.005 U	0.0048 U	0.005 U	0.0048 U	0.0051 U	-	0.0048 U	0.0052 U	-	0.0048 U	0.0052 U	0.0048 U	0.0054 U	0.005 U	0.0048 U
Hexachlorobenzene	mg/L	0.0002 U	0.00019 U	0.0002 U	0.00019 U	0.0002 U	0.00019 U	0.0002 U	-	0.00019 U	0.00021 U	-	0.00019 U	0.00021 U	0.00019 U	0.00022 U	0.0002 U	0.00019 U

TABLE 3.9

PART 201 CRITERIA EXCEEDANCES - GROUNDWATER
2013 RFI REPORT
FORMER GENRERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation		*EAST01*	*EAST01*	*EAST01*	*EAST01*	*EAST01*	*EAST01*	*EAST01*	*EAST01*	*EAST01*	*EAST01*	*EAST01*	*EAST01*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*
Aquifer		*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Deep*	*Deep*	*Deep*	*Intermediate*	*Intermediate*
Perimeter Status (1)		*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*
Sample Location		*CRA-209M*	*CRA-209M*	*CRA-320M*	*CRA-320M*	*CRA-342M*	*CRA-342M*	*CRA-828M*	*CRA-828M*	*CRA-828M*	*CRA-829M*	*CRA-829M*	*CRA-829M*	*CRA-785D*	*CRA-785D*	*CRA-785D*	*CRA-712I*	*CRA-712I*
Sample Identification (GW-17358-)		*041712-DR-1046*	*040213-CT-010*	*041712-DR-1045*	*040213-CT-012*	*041712-DR-1047*	*040213-CT-011*	*012312-DR-023*	*020712-SK-036*	*040213-CT-008*	*012312-DR-024*	*020712-SK-037*	*040213-CT-009*	*042312-CB-1080*	*041013-JY-077*	*041113-DR-086*	*041912-DR-1057*	*040813-JY-046*
Sample Date		*4/17/2012*	*4/2/2013*	*4/17/2012*	*4/2/2013*	*4/17/2012*	*4/2/2013*	*1/23/2012*	*2/7/2012*	*4/2/2013*	*1/23/2012*	*2/7/2012*	*4/2/2013*	*4/23/2012*	*4/10/2013*	*4/11/2013*	*4/19/2012*	*4/8/2013*
Sample Type																		
SVOCs Continued																		
Hexachlorobutadiene	mg/L	0.00098 U	0.00097 U	0.001 U	0.00096 U	0.00099 U	0.00095 U	0.001 U	-	0.00095 U	0.001 U	-	0.00095 U	0.001 U	0.00096 U	0.0011 U	0.00099 U	0.00095 U
Hexachlorocyclopentadiene	mg/L	0.0049 U	0.0049 U	0.005 U	0.0048 U	0.005 U	0.0048 U	0.0051 U	-	0.0048 U	0.0052 U	-	0.0048 U	0.0052 U	0.0048 U	0.0054 U	0.005 U	R
Hexachloroethane	mg/L	0.0049 U	0.0049 U	0.005 U	0.0048 U	0.005 U	0.0048 U	0.0051 U	-	0.0048 U	0.0052 U	-	0.0048 U	0.0052 U	0.0048 U	0.0054 U	0.005 U	0.0048 U
Indeno(1,2,3-cd)pyrene	mg/L	0.002 U	0.0019 U	0.002 U	0.0019 U	0.002 U	0.0019 U	0.002 U	-	0.0019 U	0.0021 U	-	0.0019 U	0.0021 U	0.0019 U	0.0022 U	0.002 U	0.0019 U
Isophorone	mg/L	0.0049 U	0.0049 U	0.005 U	0.0048 U	0.005 U	0.0048 U	0.0051 U	-	0.0048 U	0.0052 U	-	0.0048 U	0.0052 U	0.0048 U	0.0054 U	0.005 U	0.0048 U
Naphthalene	mg/L	0.0049 U	0.0049 U	0.005 U	0.0048 U	0.005 U	0.0048 U	0.0051 U	-	0.0048 U	0.0052 U	-	0.0048 U	0.0052 U	0.0048 U	0.0054 U	0.005 U	0.0048 U
Nitrobenzene	mg/L	0.0029 U	0.0029 U	0.003 U	0.0029 U	0.003 U	0.0029 U	0.0031 U	-	0.0029 U	0.0031 U	-	0.0029 U	0.0031 U	0.0029 U	0.0032 U	0.003 U	0.0029 U
N-Nitrosodi-n-propylamine	mg/L	0.0049 U	0.0049 U	0.005 U	0.0048 U	0.005 U	0.0048 U	0.0051 U	-	0.0048 U	0.0052 U	-	0.0048 U	0.0052 U	0.0048 U	0.0054 U	0.005 U	0.0048 U
N-Nitrosodiphenylamine	mg/L	0.0049 U	0.0049 U	0.005 U	0.0048 U	0.005 U	0.0048 U	0.0051 U	-	0.0048 U	0.0052 U	-	0.0048 U	0.0052 U	0.0048 U	0.0054 U	0.005 U	0.0048 U
Pentachlorophenol	mg/L	0.0049 U	0.0049 U	0.005 U	0.0048 U	0.005 U	0.0048 U	0.0051 U	-	0.0048 U	0.0052 U	-	0.0048 U	0.0052 U	0.0048 U	0.0054 U	0.005 U	0.0048 U
Phenanthrene	mg/L	0.002 U	0.0019 U	0.002 U	0.0019 U	0.002 U	0.0019 U	0.002 U	-	0.0019 U	0.0021 U	-	0.0019 U	0.0021 U	0.0019 U	0.0022 U	0.002 U	0.0019 U
Phenol	mg/L	0.0049 U	0.0049 U	0.005 U	0.0048 U	0.005 U	0.0048 U	0.0051 U	-	0.0048 U	0.0052 U	-	0.0048 U	0.0052 U	0.0048 U	0.0054 U	0.005 U	0.0048 U
Pyrene	mg/L	0.0049 U	0.0049 U	0.005 U	0.0048 U	0.005 U	0.0048 U	0.0051 U	-	0.0048 U	0.0052 U	-	0.0048 U	0.0052 U	0.0048 U	0.0054 U	0.005 U	0.0048 U
Metals																		
Aluminum	mg/L	0.05 U	0.036 J	0.024 J	0.05 U	0.023 J	**0.051[ab]**	**1.4[ab]**	-	0.039 J	**0.35[ab]**	-	**0.11[ab]**	**16[ab]**	**1.9[ab]**	**7.9 J[ab]**	0.021 J	0.05 U
Aluminum (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**0.3[ab]**	-	-
Antimony	mg/L	0.002 U	0.002 U	0.00039 J	0.002 U	0.00028 J	0.002 U	0.00042 J	-	0.002 U	0.0002 J	-	0.002 U	0.00052 J	0.002 U	0.002 U	0.00028 J	0.002 U
Antimony (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.002 U	-	-
Arsenic	mg/L	0.0075	0.0052	0.0018 J	0.0011 J	0.0011 J	0.00092 J	0.0016 J	-	0.00094 J	0.0012 J	-	0.001 J	0.0041 J	0.0011 J	0.0027 J	0.0094	**0.02[abc]**
Arsenic (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00089 J	-	-
Barium	mg/L	0.25	0.19	0.088 J	0.14	0.05 J	0.038 J	0.079 J	-	0.087 J	0.075 J	-	0.087 J	0.17	0.06 J	0.19	0.43	0.44
Barium (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.062 J	-	-
Beryllium	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	-	0.001 U	0.001 U	-	0.001 U	0.00062 J	0.001 U	0.00042 J	0.001 U	0.001 U
Beryllium (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.001 U	-	-
Cadmium	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	-	0.001 U	0.001 U	-	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Cadmium (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.001 U	-	-
Calcium	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	36	-	-	-	-
Chromium	mg/L	0.01 U	0.01 U	0.0012 J	0.01 U	0.01 U	0.01 U	0.0021 J	-	0.01 U	0.01 U	-	0.01 U	**0.026[c]**	0.0039 J	**0.017[c]**	0.01 U	0.01 U
Chromium (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0011 J	-	-
Chromium III (trivalent)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chromium VI (hexavalent)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cobalt	mg/L	0.001 J	0.00059 J	0.02 U	0.02 U	0.00025 J	0.00026 J	0.0012 J	-	0.00027 J	0.00099 J	-	0.0012 J	0.0056 J	0.00078 J	0.0038 J	0.0012 J	0.00036 J
Cobalt (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00027 J	-	-
Copper	mg/L	0.004 U	0.001 J	0.004 U	0.0012 J	0.004 U	0.0017 J	0.004 U	-	0.00059 J	0.004 U	-	0.0012 J	0.012	0.004 U	0.017 U	0.0026 J	0.00099 J
Copper (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.004 U	-	-
Iron	mg/L	**3.6[ab]**	**2[ab]**	0.2 U	0.2 U	0.2 U	0.2 U	**1.1[ab]**	-	0.23	**0.46[ab]**	-	**0.34[ab]**	**14[ab]**	**2[ab]**	**9.3[ab]**	**0.86[ab]**	**2.2[ab]**
Iron (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**0.42[ab]**	-	-
Lead	mg/L	0.003 U	0.00049 J	0.003 U	0.003 U	0.003 U	0.00019 J	0.00069 J	-	0.003 U	0.00032 J	-	0.00024 J	**0.0048[ab]**	0.0016 J	**0.015[ab]**	0.0036	0.0005 J
Lead (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00037 J	-	-
Magnesium	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	12	-	-	-	-
Manganese	mg/L	**0.6[ab]**	**0.35[ab]**	0.00098 J	0.05 U	**0.066[ab]**	**0.073[ab]**	**0.1[ab]**	-	**0.072[ab]**	**0.23[ab]**	-	**0.41[ab]**	**0.2[ab]**	0.041 J	**0.14[ab]**	**0.12[ab]**	**0.091[ab]**
Manganese (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.02 J	-	-
Mercury	mg/L	0.04 U	0.0002 U	0.04 U	0.0002 U	0.04 U	0.0002 U	0.04 U	-	0.0002 U	0.04 U	-	0.0002 U	0.04 U	0.0002 U	0.0002 U	0.04 U	0.0002 U
Mercury (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0002 U	-	-
Nickel	mg/L	0.0017 J	0.0016 J	0.0006 J	0.00064 J	0.0018 J	0.0022 J	0.011 J	-	0.0014 J	0.0021 J	-	0.0022 J	0.019 J	0.0028 J	0.013 J	0.0019 J	0.00066 J
Nickel (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0031 J	-	-
Potassium	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	8.4	-	-	-	-
Selenium	mg/L	0.005 U	0.005 U	0.0029 J	**0.0052[c]**	0.00057 J	0.0011 J	0.0008 J	-	0.005 U	0.005 U	-	0.005 U	0.00067 J	0.005 U	0.00071 J	0.005 U	0.005 U
Selenium (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.005 U	-	-
Silver	mg/L	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	-	0.0002 U	0.0002 U	-	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Silver (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0002 U	-	-
Sodium	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	58	-	-	-	-

TABLE 3.9

PART 201 CRITERIA EXCEEDANCES - GROUNDWATER
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FORMER GENRERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation		*EAST01*	*EAST01*	*EAST01*	*EAST01*	*EAST01*	*EAST01*	*EAST01*	*EAST01*	*EAST01*	*EAST01*	*EAST01*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*
Aquifier		*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Deep*	*Deep*	*Deep*	*Intermediate*	*Intermediate*
Perimeter Status (1)		*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*
Sample Location		*CRA-209M*	*CRA-209M*	*CRA-320M*	*CRA-320M*	*CRA-342M*	*CRA-342M*	*CRA-828M*	*CRA-828M*	*CRA-828M*	*CRA-829M*	*CRA-829M*	*CRA-829M*	*CRA-785D*	*CRA-785D*	*CRA-785D*	*CRA-712I*	*CRA-712I*
Sample Identification (GW-17358-)		*041712-DR-1046*	*040213-CT-010*	*041712-DR-1045*	*040213-CT-012*	*041712-DR-1047*	*040213-CT-011*	*012312-DR-023*	*020712-SK-036*	*040213-CT-008*	*012312-DR-024*	*020712-SK-037*	*040213-CT-009*	*042312-CB-1080*	*041013-JY-077*	*041113-DR-086*	*041912-DR-1057*	*040813-JY-046*
Sample Date		*4/17/2012*	*4/2/2013*	*4/17/2012*	*4/2/2013*	*4/17/2012*	*4/2/2013*	*1/23/2012*	*2/7/2012*	*4/2/2013*	*1/23/2012*	*2/7/2012*	*4/2/2013*	*4/23/2012*	*4/10/2013*	*4/11/2013*	*4/19/2012*	*4/8/2013*
Sample Type																		
Metals Continued																		
Thallium	mg/L	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.00069 J	-	0.002 U	0.00036 J	-	0.002 U	0.00059 J	0.002 U	0.0003 J	0.002 U	0.002 U
Thallium (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00023 J	-	-
Vanadium	mg/L	0.004 U	0.004 U	0.0013 J	0.00061 J	0.004 U	0.004 U	0.0033 J	-	0.004 U	0.0011 J	-	0.00055 J	**0.04**[ac]	**0.0047**[a]	**0.022**[a]	0.004 U	0.004 U
Vanadium (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00085 J	-	-
Zinc	mg/L	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	-	0.05 U	0.05 U	-	0.05 U	0.05 U	0.056 U	0.12 U	0.006 J	0.05 U
Zinc (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.05 U	-	-
Polychlorinated Biphenyls (PCBs)																		
Aroclor-1016 (PCB-1016)	mg/L	0.000099 U	0.000095 U	0.0001 U	0.000095 U	0.000098 U	0.000096 U	-	0.000095 U	0.000095 U	-	0.000095 U	0.000095 U	0.0001 U	0.0001 U	0.00011 U	0.0001 U	0.000096 U
Aroclor-1221 (PCB-1221)	mg/L	0.000099 U	0.000095 U	0.0001 U	0.000095 U	0.000098 U	0.000096 U	-	0.000095 U	0.000095 U	-	0.000095 U	0.000095 U	0.0001 U	0.0001 U	0.00011 U	0.0001 U	0.000096 U
Aroclor-1232 (PCB-1232)	mg/L	0.000099 U	0.000095 U	0.0001 U	0.000095 U	0.000098 U	0.000096 U	-	0.000095 U	0.000095 U	-	0.000095 U	0.000095 U	0.0001 U	0.0001 U	0.00011 U	0.0001 U	0.000096 U
Aroclor-1242 (PCB-1242)	mg/L	0.000099 U	0.000095 U	0.0001 U	0.000095 U	0.000098 U	0.000096 U	-	0.000095 U	0.000095 U	-	0.000095 U	0.000095 U	0.0001 U	0.0001 U	0.00011 U	0.0001 U	0.000096 U
Aroclor-1248 (PCB-1248)	mg/L	0.000099 U	0.000095 U	0.0001 U	0.000095 U	0.000098 U	0.000096 U	-	0.000095 U	0.000095 U	-	0.000095 U	0.000095 U	0.0001 U	0.0001 U	0.00011 U	0.0001 U	0.000096 U
Aroclor-1254 (PCB-1254)	mg/L	0.000099 U	0.000095 U	0.0001 U	0.000095 U	0.000098 U	0.000096 U	-	0.000095 U	0.000095 U	-	0.000095 U	0.000095 U	0.0001 U	0.0001 U	0.00011 U	0.0001 U	0.000096 U
Aroclor-1260 (PCB-1260)	mg/L	0.000099 U	0.000095 U	0.0001 U	0.000095 U	0.000098 U	0.000096 U	-	0.000095 U	0.000095 U	-	0.000095 U	0.000095 U	0.0001 U	0.0001 U	0.00011 U	0.0001 UJ	0.00004 J
Aroclor-1262 (PCB-1262)	mg/L	0.000099 U	0.000095 U	0.0001 U	0.000095 U	0.000098 U	0.000096 U	-	-	0.000095 U	-	-	0.000095 U	0.0001 U	0.0001 U	0.00011 U	0.0001 U	0.000096 U
Aroclor-1268 (PCB-1268)	mg/L	0.000099 U	0.000095 U	0.0001 U	0.000095 U	0.000098 U	0.000096 U	-	-	0.000095 U	-	-	0.000095 U	0.0001 U	0.0001 U	0.00011 U	0.0001 U	0.000096 U
Total PCBs	mg/L	ND	ND	ND	ND	ND	ND	-	ND	ND	-	ND	ND	ND	ND	ND	ND	0.00004 J
General Chemistry																		
Cyanide (amenable)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Phosphorus	mg/L	-	-	-	-	-	0.1 U	-	-	-	-	-	-	-	0.04 J	0.17	-	0.1 U
Field Parameters																		
Turbidity, field	NTU	0.88	0.49	1.74	0.56	2.01	2.49	17.6	16.9	4.39	20.1	16.2	7.81	647	70.1	625	4.85	9.47

Notes
Michigan Part 201 generic clean up criteria (updated September 28, 2012)
ID - Insufficient data to develop criterion
NLV - Hazardous substance is not likely to volatilize under most conditions
NA - Criterion or value is not available

Perimeter Status (1) - N - non-perimeter, Y - perimeter
mg/L - miligram per liter
NTU - Nephelometric Turbidity Unit

Notes:
U - Not detected at the associated reporting limit.
J - Estimated concentration.
UJ - Not detected; associated reporting limit is estimated.

TABLE 3.9

PART 201 CRITERIA EXCEEDANCES - GROUNDWATER
2013 RFI REPORT
FORMER GENRERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation		*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*
Aquifier		*Intermediate*	*Intermediate*	*Lower Shallow*	*Lower Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*
Perimeter Status (1)		*Y*	*Y*	*Y*	*Y*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*
Sample Location		*CRA-785I*	*CRA-785I*	*CRA-827ML*	*CRA-827ML*	*CRA-110M*	*CRA-110M*	*CRA-113M*	*CRA-113M*	*CRA-124M*	*CRA-124M*	*CRA-238M*	*CRA-238M*	*CRA-314M*	*CRA-314M*	*CRA-315M*	*CRA-315M*	*CRA-756M*
Sample Identification (GW-17358-)		*042312-CB-1079*	*041013-JY-078*	*041712-CB-1038*	*040813-JY-053*	*041212-CB-1008*	*040913-EM-067*	*041312-CB-1013*	*041113-JY-088*	*041612-CB-1019*	*041113-JY-091*	*041312-CB-1014*	*041113-JY-090*	*041312-CB-1015*	*040913-EM-068*	*041312-CB-1012*	*041113-JY-089*	*041212-DR-1001*
Sample Date		*4/23/2012*	*4/10/2013*	*4/17/2012*	*4/8/2013*	*4/12/2012*	*4/9/2013*	*4/13/2012*	*4/11/2013*	*4/16/2012*	*4/11/2013*	*4/13/2012*	*4/11/2013*	*4/13/2012*	*4/9/2013*	*4/13/2012*	*4/11/2013*	*4/12/2012*
Sample Type																		
Volatile Organic Compounds (VOCs)	***Units***																	
1,1,1-Trichloroethane	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,1,2,2-Tetrachloroethane	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,1,2-Trichloroethane	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,1-Dichloroethane	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.00027 J	0.00018 J	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.00053 J	0.001 U	0.001 U	0.001 U	0.00023 J	0.001 U
1,1-Dichloroethene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,2,4-Trichlorobenzene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,2-Dibromo-3-chloropropane (DBCP)	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,2-Dibromoethane (Ethylene dibromide)	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,2-Dichlorobenzene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,2-Dichloroethane	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,2-Dichloropropane	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.00082 J
1,3-Dichlorobenzene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,4-Dichlorobenzene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
2-Butanone (Methyl ethyl ketone) (MEK)	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
2-Hexanone	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Acetone	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.0014 J	0.01 UJ	0.01 U	0.01 U	0.0013 J	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Benzene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Bromodichloromethane	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Bromoform	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Bromomethane (Methyl bromide)	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Carbon disulfide	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Carbon tetrachloride	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Chlorobenzene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Chloroethane	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Chloroform (Trichloromethane)	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Chloromethane (Methyl chloride)	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
cis-1,2-Dichloroethene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.012	0.0092	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.00058 J	0.00061 J	0.0005 J	0.0059	0.0049	0.006
cis-1,3-Dichloropropene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Cyclohexane	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Dibromochloromethane	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Dichlorodifluoromethane (CFC-12)	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Ethylbenzene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Isopropyl benzene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Methyl acetate	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Methyl cyclohexane	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Methyl tert butyl ether (MTBE)	mg/L	0.005 U	0.001 U	0.005 U	0.001 U	0.005 U	0.001 U	0.005 U	0.001 U	0.005 U	0.001 U	0.005 U	0.001 U	0.005 U	0.001 U	0.005 U	0.001 U	0.005 U
Methylene chloride	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Styrene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Tetrachloroethene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	**0.018**[b]
Toluene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
trans-1,2-Dichloroethene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.00058 J	0.00041 J	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0018	0.0016	0.0015	0.0011	0.0024
trans-1,3-Dichloropropene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Trichloroethene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	**0.0088**[b]	**0.0056**[b]	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	**0.0058**[b]
Trichlorofluoromethane (CFC-11)	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Trifluorotrichloroethane (Freon 113)	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Vinyl chloride	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	**0.0054**[b]	**0.0031**[b]	**0.0023**[b]	**0.003**[b]	**0.0044**[b]	**0.0033**[b]	0.0005 J
Xylenes (total)	mg/L	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.0012 J	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U

TABLE 3.9

PART 201 CRITERIA EXCEEDANCES - GROUNDWATER
2013 RFI REPORT
FORMER GENRERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation		*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*
Aquifier		*Intermediate*	*Intermediate*	*Lower Shallow*	*Lower Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*
Perimeter Status (1)		*Y*	*Y*	*Y*	*Y*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*
Sample Location		*CRA-785I*	*CRA-785I*	*CRA-827ML*	*CRA-827ML*	*CRA-110M*	*CRA-110M*	*CRA-113M*	*CRA-113M*	*CRA-124M*	*CRA-124M*	*CRA-238M*	*CRA-238M*	*CRA-314M*	*CRA-314M*	*CRA-315M*	*CRA-315M*	*CRA-756M*
Sample Identification (GW-17358-)		*042312-CB-1079*	*041013-JY-078*	*041712-CB-1038*	*040813-JY-053*	*041212-CB-1008*	*040913-EM-067*	*041312-CB-1013*	*041113-JY-088*	*041612-CB-1019*	*041113-JY-091*	*041312-CB-1014*	*041113-JY-090*	*041312-CB-1015*	*040913-EM-068*	*041312-CB-1012*	*041113-JY-089*	*041212-DR-1001*
Sample Date		*4/23/2012*	*4/10/2013*	*4/17/2012*	*4/8/2013*	*4/12/2012*	*4/9/2013*	*4/13/2012*	*4/11/2013*	*4/16/2012*	*4/11/2013*	*4/13/2012*	*4/11/2013*	*4/13/2012*	*4/9/2013*	*4/13/2012*	*4/11/2013*	*4/12/2012*
Sample Type																		
Semi-Volatile Organic Compounds (SVOCs)																		
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	mg/L	0.0052 U	0.0048 U	0.0054 U	0.0048 U	0.0053 U	0.0049 U	0.0048 UJ	0.025 U	0.0052 U	0.005 U	0.005 U	0.0049 U	0.0052 U	0.0049 U	0.0048 U	0.005 U	0.005 U
2,4,5-Trichlorophenol	mg/L	0.0052 U	0.0048 U	0.0054 U	0.0048 U	0.0053 U	0.0049 U	0.0048 U	0.025 U	0.0052 U	0.005 U	0.005 U	0.0049 U	0.0052 U	0.0049 U	0.0048 U	0.005 U	0.005 U
2,4,6-Trichlorophenol	mg/L	0.0042 U	0.0038 U	0.0043 U	0.0038 U	0.0042 U	0.0039 U	0.0038 U	0.02 U	0.0042 U	0.004 U	0.004 U	0.0039 U	0.0041 U	0.0039 U	0.0038 U	0.004 U	0.004 U
2,4-Dichlorophenol	mg/L	0.01 U	0.0095 U	0.011 U	0.0095 U	0.011 U	0.0097 U	0.0095 U	0.05 U	0.01 U	0.01 U	0.01 U	0.0097 U	0.01 U	0.0098 U	0.0095 U	0.0099 U	0.01 U
2,4-Dimethylphenol	mg/L	0.0052 U	0.0048 U	0.0054 U	0.0048 U	0.0053 U	0.0049 U	0.0048 U	0.025 U	0.0052 U	0.005 U	0.005 U	0.0049 U	0.0052 U	0.0049 U	0.0048 U	0.005 U	0.005 U
2,4-Dinitrophenol	mg/L	0.021 U	0.019 U	0.022 U	0.019 U	0.021 U	0.019 U	0.019 U	0.1 U	0.021 U	0.02 U	0.02 U	0.019 U	0.021 U	0.02 U	0.019 U	0.02 U	0.02 U
2,4-Dinitrotoluene	mg/L	0.0052 U	0.0048 U	0.0054 U	0.0048 U	0.0053 U	0.0049 U	0.0048 UJ	0.025 U	0.0052 U	0.005 U	0.005 U	0.0049 U	0.0052 U	0.0049 U	0.0048 U	0.005 U	0.005 U
2,6-Dinitrotoluene	mg/L	0.0052 U	0.0048 U	0.0054 U	0.0048 U	0.0053 U	0.0049 U	0.0048 UJ	0.025 U	0.0052 U	0.005 U	0.005 U	0.0049 U	0.0052 U	0.0049 U	0.0048 U	0.005 U	0.005 U
2-Chloronaphthalene	mg/L	0.0052 U	0.0048 U	0.0054 U	0.0048 U	0.0053 U	0.0049 U	0.0048 UJ	0.025 U	0.0052 U	0.005 U	0.005 U	0.0049 U	0.0052 U	0.0049 U	0.0048 U	0.005 U	0.005 U
2-Chlorophenol	mg/L	0.0052 U	0.0048 U	0.0054 U	0.0048 U	0.0053 U	0.0049 U	0.0048 U	0.025 U	0.0052 U	0.005 U	0.005 U	0.0049 U	0.0052 U	0.0049 U	0.0048 U	0.005 U	0.005 U
2-Methylnaphthalene	mg/L	0.0052 U	0.0048 U	0.0054 U	0.0048 U	0.0053 U	0.0049 U	0.0048 UJ	0.025 U	0.0052 U	0.005 U	0.005 U	0.0049 U	0.0052 U	0.0049 U	0.0048 U	0.005 U	0.005 U
2-Methylphenol	mg/L	0.0052 U	0.0048 U	0.0054 U	0.0048 U	0.0053 U	0.0049 U	0.0048 U	0.025 U	0.0052 U	0.005 U	0.005 U	0.0049 U	0.0052 U	0.0049 U	0.0048 U	0.005 U	0.005 U
2-Nitroaniline	mg/L	0.021 U	0.019 U	0.022 U	0.019 U	0.021 U	0.019 U	0.019 UJ	0.1 U	0.021 U	0.02 U	0.02 U	0.019 U	0.021 U	0.02 U	0.019 U	0.02 U	0.02 U
2-Nitrophenol	mg/L	0.0052 U	0.0048 U	0.0054 U	0.0048 U	0.0053 U	0.0049 U	0.0048 U	0.025 U	0.0052 U	0.005 U	0.005 U	0.0049 U	0.0052 U	0.0049 U	0.0048 U	0.005 U	0.005 U
3&4-Methylphenol	mg/L	0.0052 U	0.0048 U	0.0054 U	0.0048 U	0.0053 U	0.0049 U	0.0048 U	0.025 U	0.0052 U	0.005 U	0.005 U	0.0049 U	0.0052 U	0.0049 U	0.0048 U	0.005 U	0.005 U
3,3'-Dichlorobenzidine	mg/L	0.001 U	0.00095 U	0.0011 U	0.00095 U	0.0011 U	0.00097 U	0.00095 UJ	R	R	0.001 U	0.001 U	0.00097 U	0.001 U	0.00098 U	0.00095 U	0.00099 U	0.001 U
3-Nitroaniline	mg/L	0.021 U	0.019 U	0.022 U	0.019 U	0.021 U	0.019 U	0.019 UJ	0.1 UJ	0.021 U	0.02 U	0.02 U	0.019 U	0.021 U	0.02 U	0.019 U	0.02 U	0.02 U
4,6-Dinitro-2-methylphenol	mg/L	0.021 U	0.019 U	0.022 U	0.019 U	0.021 U	0.019 U	0.019 U	0.1 U	0.021 U	0.02 U	0.02 U	0.019 U	0.021 U	0.02 U	0.019 U	0.02 U	0.02 U
4-Bromophenyl phenyl ether	mg/L	0.0052 U	0.0048 U	0.0054 U	0.0048 U	0.0053 U	0.0049 U	0.0048 UJ	0.025 U	0.0052 U	0.005 U	0.005 U	0.0049 U	0.0052 U	0.0049 U	0.0048 U	0.005 U	0.005 U
4-Chloro-3-methylphenol	mg/L	0.0052 U	0.0048 U	0.0054 U	0.0048 U	0.0053 U	0.0049 U	0.0048 U	0.025 U	0.0052 U	0.005 U	0.005 U	0.0049 U	0.0052 U	0.0049 U	0.0048 U	0.005 U	0.005 U
4-Chloroaniline	mg/L	0.01 U	0.0095 U	0.011 U	0.0095 U	0.011 U	0.0097 U	0.0095 UJ	R	0.01 U	0.01 U	0.01 U	0.0097 U	0.01 U	0.0098 U	0.0095 U	0.0099 U	0.01 U
4-Chlorophenyl phenyl ether	mg/L	0.0052 U	0.0048 U	0.0054 U	0.0048 U	0.0053 U	0.0049 U	0.0048 UJ	0.025 U	0.0052 U	0.005 U	0.005 U	0.0049 U	0.0052 U	0.0049 U	0.0048 U	0.005 U	0.005 U
4-Nitroaniline	mg/L	0.021 U	0.019 U	0.022 U	0.019 U	0.021 U	0.019 U	0.019 UJ	0.1 U	0.021 U	0.02 U	0.02 U	0.019 U	0.021 U	0.02 U	0.019 U	0.02 U	0.02 U
4-Nitrophenol	mg/L	0.021 U	0.019 U	0.022 U	0.019 U	0.021 U	0.019 U	0.019 U	0.1 U	0.021 U	0.02 U	0.02 U	0.019 U	0.021 U	0.02 U	0.019 U	0.02 U	0.02 U
Acenaphthene	mg/L	0.0052 U	0.0048 U	0.0054 U	0.0048 U	0.0053 U	0.0049 U	0.0048 UJ	0.025 U	0.0052 U	0.005 U	0.005 U	0.0049 U	0.0052 U	0.0049 U	0.0048 U	0.005 U	0.005 U
Acenaphthylene	mg/L	0.0052 U	0.0048 U	0.0054 U	0.0048 U	0.0053 U	0.0049 U	0.0048 UJ	0.025 U	0.0052 U	0.005 U	0.005 U	0.0049 U	0.0052 U	0.0049 U	0.0048 U	0.005 U	0.005 U
Acetophenone	mg/L	0.0052 U	0.0048 U	0.0054 U	0.0048 U	0.0053 U	0.0049 U	0.0048 UJ	0.025 U	0.0052 U	0.005 U	0.005 U	0.0049 U	0.0052 U	0.0049 U	0.0048 U	0.005 U	0.005 U
Anthracene	mg/L	0.0052 U	0.0048 U	0.0054 U	0.0048 U	0.0053 U	0.0049 U	0.0048 UJ	0.025 U	0.0052 U	0.005 U	0.005 U	0.0049 U	0.0052 U	0.0049 U	0.0048 U	0.005 U	0.005 U
Atrazine	mg/L	0.0031 U	0.0029 U	0.0033 U	0.0029 U	0.0032 U	0.0029 U	0.0029 UJ	0.015 U	0.0031 U	0.003 U	0.003 U	0.0029 U	0.0031 U	0.0029 U	0.0029 U	0.003 U	0.003 U
Benzaldehyde	mg/L	0.0052 U	0.0048 U	0.0054 U	0.0048 U	0.0053 U	0.0049 U	0.0048 UJ	0.025 U	0.0052 U	0.005 U	0.005 U	0.0049 U	0.0052 U	0.0049 U	0.0048 U	0.005 U	0.005 U
Benzo(a)anthracene	mg/L	0.001 U	0.00095 U	0.0011 U	0.00095 U	0.0011 U	0.00097 U	0.00095 UJ	0.005 U	0.001 UJ	0.001 U	0.001 U	0.00097 U	0.001 U	0.00098 U	0.00095 U	0.00099 U	0.001 U
Benzo(a)pyrene	mg/L	0.001 U	0.00095 U	0.0011 U	0.00095 U	0.0011 U	0.00097 U	0.00095 UJ	0.005 U	0.001 U	0.001 U	0.001 U	0.00097 U	0.001 U	0.00098 U	0.00095 U	0.00099 U	0.001 U
Benzo(b)fluoranthene	mg/L	0.001 U	0.00095 U	0.0011 U	0.00095 U	0.0011 U	0.00097 U	0.00095 UJ	0.005 U	0.001 U	0.001 U	0.001 U	0.00097 U	0.001 U	0.00098 U	0.00095 U	0.00099 U	0.001 U
Benzo(g,h,i)perylene	mg/L	0.001 U	0.00095 U	0.0011 U	0.00095 U	0.0011 U	0.00097 U	0.00095 UJ	0.005 U	0.001 U	0.001 U	0.001 U	0.00097 U	0.001 U	0.00098 U	0.00095 U	0.00099 U	0.001 U
Benzo(k)fluoranthene	mg/L	0.001 U	0.00095 U	0.0011 U	0.00095 U	0.0011 U	0.00097 U	0.00095 UJ	0.005 U	0.001 U	0.001 U	0.001 U	0.00097 U	0.001 U	0.00098 U	0.00095 U	0.00099 U	0.001 U
Biphenyl (1,1-Biphenyl)	mg/L	0.0052 U	0.0048 U	0.0054 U	0.0048 U	0.0053 U	0.0049 U	0.0048 UJ	0.025 U	0.0052 U	0.005 U	0.005 U	0.0049 U	0.0052 U	0.0049 U	0.0048 U	0.005 U	0.005 U
bis(2-Chloroethoxy)methane	mg/L	0.0052 U	0.0048 U	0.0054 U	0.0048 U	0.0053 U	0.0049 U	0.0048 UJ	0.025 U	0.0052 U	0.005 U	0.005 U	0.0049 U	0.0052 U	0.0049 U	0.0048 U	0.005 U	0.005 U
bis(2-Chloroethyl)ether	mg/L	0.001 U	0.00095 U	0.0011 U	0.00095 U	0.0011 U	0.00097 U	0.00095 UJ	0.005 U	0.001 U	0.001 U	0.001 U	0.00097 U	0.001 U	0.00098 U	0.00095 U	0.00099 U	0.001 U
bis(2-Ethylhexyl)phthalate (DEHP)	mg/L	0.0052 U	0.0048 U	0.0054 U	0.0048 U	0.0053 U	0.0049 U	0.0048 UJ	0.025 U	0.0052 U	0.005 U	0.00081 J	0.0049 U	0.0052 U	0.0049 U	0.0048 U	0.005 U	0.005 U
Butyl benzylphthalate (BBP)	mg/L	0.0052 U	0.0048 U	0.0054 U	0.0048 U	0.0053 U	0.0049 U	0.0048 UJ	0.025 U	0.0052 U	0.005 U	0.005 U	0.0049 U	0.0052 U	0.0049 U	0.0048 U	0.005 U	0.005 U
Caprolactam	mg/L	0.001 J	0.0095 U	0.011 U	0.0095 U	0.011 U	0.0097 U	0.0095 UJ	0.05 U	R	0.01 U	0.01 U	0.0097 U	0.01 U	0.0098 U	0.0095 U	0.0099 U	0.01 U
Carbazole	mg/L	0.01 U	0.0095 U	0.011 U	0.0095 U	0.011 U	0.0097 U	0.0095 UJ	0.05 U	0.01 U	0.01 U	0.01 U	0.0097 U	0.01 U	0.0098 U	0.0095 U	0.0099 U	0.01 U
Chrysene	mg/L	0.001 U	0.00095 U	0.0011 U	0.00095 U	0.0011 U	0.00097 U	0.00095 UJ	0.005 U	0.001 UJ	0.001 U	0.001 U	0.00097 U	0.001 U	0.00098 U	0.00095 U	0.00099 U	0.001 U
Dibenz(a,h)anthracene	mg/L	0.0021 U	0.0019 U	0.0022 U	0.0019 U	0.0021 U	0.0019 U	0.0019 UJ	0.01 U	0.0021 U	0.002 U	0.002 U	0.0019 U	0.0021 U	0.002 U	0.0019 U	0.002 U	0.002 U
Dibenzofuran	mg/L	0.0042 U	0.0038 U	0.0043 U	0.0038 U	0.0042 U	0.0039 U	0.0038 UJ	0.02 U	0.0042 U	0.004 U	0.004 U	0.0039 U	0.0041 U	0.0039 U	0.0038 U	0.004 U	0.004 U
Diethyl phthalate	mg/L	0.0052 U	0.0048 U	0.0054 U	0.0048 U	0.0053 U	0.0049 U	0.0048 UJ	0.025 U	0.0052 U	0.005 U	0.005 U	0.0049 U	0.0052 U	0.0049 U	0.0048 U	0.005 U	0.005 U
Dimethyl phthalate	mg/L	0.0052 U	0.0048 U	0.0054 U	0.0048 U	0.0053 U	0.0049 U	0.0048 UJ	0.025 U	0.0052 U	0.005 U	0.005 U	0.0049 U	0.0052 U	0.0049 U	0.0048 U	0.005 U	0.005 U
Di-n-butylphthalate (DBP)	mg/L	0.0052 U	0.0048 U	0.0054 U	0.0048 U	0.0053 U	0.0049 U	0.0048 UJ	0.025 U	0.0052 U	0.005 U	0.005 U	0.0049 U	0.0052 U	0.0049 U	0.0048 U	0.005 U	0.005 U
Di-n-octyl phthalate (DnOP)	mg/L	0.0052 U	0.0048 U	0.0054 U	0.0048 U	0.0053 U	0.0049 U	0.0048 UJ	0.025 U	0.0052 U	0.005 U	0.005 U	0.0049 U	0.0052 U	0.0049 U	0.0048 U	0.005 U	0.005 U
Fluoranthene	mg/L	0.001 U	0.00095 U	0.0011 U	0.00095 U	0.0011 U	0.00097 U	0.00095 UJ	0.005 U	0.001 U	0.001 U	0.001 U	0.00097 U	0.001 U	0.00098 U	0.00095 U	0.00099 U	0.001 U
Fluorene	mg/L	0.0052 U	0.0048 U	0.0054 U	0.0048 U	0.0053 U	0.0049 U	0.0048 UJ	0.025 U	0.0052 U	0.005 U	0.005 U	0.0049 U	0.0052 U	0.0049 U	0.0048 U	0.005 U	0.005 U
Hexachlorobenzene	mg/L	0.00021 U	0.00019 U	0.00022 U	0.00019 U	0.00021 U	0.00019 U	0.00019 UJ	0.001 U	0.00021 U	0.0002 U	0.0002 U	0.00019 U	0.00021 U	0.0002 U	0.00019 U	0.0002 U	0.0002 U

TABLE 3.9

PART 201 CRITERIA EXCEEDANCES - GROUNDWATER
2013 RFI REPORT
FORMER GENRERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation		EAST02	EAST02	EAST02	EAST02	EAST02	EAST02	EAST02	EAST02	EAST02	EAST02	EAST02	EAST02	EAST02	EAST02	EAST02	EAST02
Aquifier		Intermediate	Intermediate	Lower Shallow	Lower Shallow	Shallow	Shallow	Shallow	Shallow	Shallow	Shallow	Shallow	Shallow	Shallow	Shallow	Shallow	Shallow
Perimeter Status (1)		Y	Y	Y	Y	N	N	N	N	N	N	N	N	N	N	N	N
Sample Location		CRA-785I	CRA-785I	CRA-827ML	CRA-827ML	CRA-110M	CRA-110M	CRA-113M	CRA-113M	CRA-124M	CRA-124M	CRA-238M	CRA-238M	CRA-314M	CRA-314M	CRA-315M	CRA-315M	CRA-756M
Sample Identification (GW-17358-)		042312-CB-1079	041013-JY-078	041712-CB-1038	040813-JY-053	041212-CB-1008	040913-EM-067	041312-CB-1013	041113-JY-088	041612-CB-1019	041113-JY-091	041312-CB-1014	041113-JY-090	041312-CB-1015	040913-EM-068	041312-CB-1012	041113-JY-089	041212-DR-1001
Sample Date		4/23/2012	4/10/2013	4/17/2012	4/8/2013	4/12/2012	4/9/2013	4/13/2012	4/11/2013	4/16/2012	4/11/2013	4/13/2012	4/11/2013	4/13/2012	4/9/2013	4/13/2012	4/11/2013	4/12/2012
Sample Type																		
SVOCs Continued																		
Hexachlorobutadiene	mg/L	0.001 U	0.00095 U	0.0011 U	0.00095 U	0.0011 U	0.00097 U	0.00095 UJ	0.005 U	0.001 U	0.001 U	0.001 U	0.00097 U	0.001 U	0.00098 U	0.00095 U	0.00099 U	0.001 U
Hexachlorocyclopentadiene	mg/L	0.0052 U	0.0048 U	0.0054 U	R	0.0053 U	R	0.0048 UJ	R	0.0052 U	0.005 U	0.005 U	0.0049 U	0.0052 U	R	0.0048 U	0.005 U	0.005 U
Hexachloroethane	mg/L	0.0052 U	0.0048 U	0.0054 U	0.0048 U	0.0053 U	0.0049 U	0.0048 UJ	0.025 U	0.0052 U	0.005 U	0.005 U	0.0049 U	0.0052 U	0.0049 U	0.0048 U	0.005 U	0.005 U
Indeno(1,2,3-cd)pyrene	mg/L	0.0021 U	0.0019 U	0.0022 U	0.0019 U	0.0021 U	0.0019 U	0.0019 UJ	0.01 U	0.0021 U	0.002 U	0.002 U	0.0019 U	0.0021 U	0.002 U	0.0019 U	0.002 U	0.002 U
Isophorone	mg/L	0.0052 U	0.0048 U	0.0054 U	0.0048 U	0.0053 U	0.0049 U	0.0048 UJ	0.025 U	0.0052 U	0.005 U	0.005 U	0.0049 U	0.0052 U	0.0049 U	0.0048 U	0.005 U	0.005 U
Naphthalene	mg/L	0.0052 U	0.0048 U	0.0054 U	0.0048 U	0.0053 U	0.0049 U	0.0048 UJ	0.025 U	0.0052 U	0.005 U	0.005 U	0.0049 U	0.0052 U	0.0049 U	0.0048 U	0.005 U	0.005 U
Nitrobenzene	mg/L	0.0031 U	0.0029 U	0.0033 U	0.0029 U	0.0032 U	0.0029 U	0.0029 UJ	0.015 U	0.0031 U	0.003 U	0.003 U	0.0029 U	0.0031 U	0.0029 U	0.0029 U	0.003 U	0.003 U
N-Nitrosodi-n-propylamine	mg/L	0.0052 U	0.0048 U	0.0054 U	0.0048 U	0.0053 U	0.0049 U	0.0048 UJ	0.025 U	0.0052 U	0.005 U	0.005 U	0.0049 U	0.0052 U	0.0049 U	0.0048 U	0.005 U	0.005 U
N-Nitrosodiphenylamine	mg/L	0.0052 U	0.0048 U	0.0054 U	0.0048 U	0.0053 U	0.0049 U	0.0048 UJ	0.025 U	0.0052 U	0.005 U	0.005 U	0.0049 U	0.0052 U	0.0049 U	0.0048 U	0.005 U	0.005 U
Pentachlorophenol	mg/L	0.0052 U	0.0048 U	0.0054 U	0.0048 U	0.0053 U	0.0049 U	0.0048 U	0.025 U	0.0052 U	0.005 U	0.005 U	0.0049 U	0.0052 U	0.0049 U	0.0048 U	0.005 U	0.005 U
Phenanthrene	mg/L	0.0021 U	0.0019 U	0.0022 U	0.0019 U	0.0021 U	0.0019 U	0.0019 UJ	0.01 U	0.0021 U	0.002 U	0.002 U	0.0019 U	0.0021 U	0.002 U	0.0019 U	0.002 U	0.002 U
Phenol	mg/L	0.0052 U	0.0048 U	0.0054 U	0.0048 U	0.0053 U	0.0049 U	0.0048 U	0.025 U	0.0052 U	0.005 U	0.005 U	0.0049 U	0.0052 U	0.0049 U	0.0048 U	0.005 U	0.005 U
Pyrene	mg/L	0.0052 U	0.0048 U	0.0054 U	0.0048 U	0.0053 U	0.0049 U	0.0048 UJ	0.025 U	0.0052 U	0.005 U	0.005 U	0.0049 U	0.0052 U	0.0049 U	0.0048 U	0.005 U	0.005 U
Metals																		
Aluminum	mg/L	**0.2**[ab]	**0.058**[ab]	0.029 J	0.05 U	**0.06**[b]	0.023 J	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	**0.061**[b]
Aluminum (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Antimony	mg/L	0.00026 J	0.002 U	0.00026 J	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.00019 J	0.002 U	0.00029 J	0.002 U	0.002 U	0.002 U	0.00026 J	0.002 U	0.00014 J
Antimony (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Arsenic	mg/L	**0.019**[abc]	**0.02**[abc]	0.0016 J	0.0015 J	0.01	0.01	0.0091	0.0092	**0.013**[bc]	0.0041 J	0.0082	0.0098	**0.025**[bc]	**0.023**[bc]	**0.017**[bc]	**0.019**[bc]	**0.046**[bc]
Arsenic (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Barium	mg/L	0.19	0.17	0.016 J	0.057 J	0.25	0.3	0.078 J	0.15	0.79	1	0.037 J	0.038 J	0.37	0.37	0.093 J	0.14	0.18
Barium (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Beryllium	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Beryllium (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cadmium	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.00015 J	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.00054 J	0.0003 J	0.001 U
Cadmium (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Calcium	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chromium	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.0008 J	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Chromium (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chromium III (trivalent)	mg/L	-	-	-	-	-	-	-	-	0.01 U	-	-	-	-	-	-	-	-
Chromium VI (hexavalent)	mg/L	-	-	-	-	-	-	-	-	0.01 U	-	-	-	-	-	-	-	-
Cobalt	mg/L	0.00037 J	0.000068 J	0.0002 J	0.00032 J	0.00093 J	0.00066 J	0.00011 J	0.00039 J	0.00054 J	0.02 U	0.00081 J	0.00093 J	0.0021 J	0.0021 J	0.0077 J	0.0086 J	0.0034 J
Cobalt (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Copper	mg/L	0.004 U	0.004 U	0.004 U	0.0004 J	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.0017 J
Copper (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Iron	mg/L	0.25	**0.88**[ab]	0.2 U	0.099 J	**3.6**[b]	**5.1**[b]	**2.9**[b]	**5.2**[b]	**14**[b]	**7.3**[b]	**1.5**[b]	**1.3**[b]	**15**[b]	**14**[b]	**3.5**[b]	**4.5**[b]	**9.7**[b]
Iron (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lead	mg/L	0.00023 J	0.00033 J	0.003 U	0.003 U	0.003 U	0.003 U	0.00027 J	0.00039 J	0.00021 J	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.00019 J	0.00074 J	0.00067 J
Lead (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Magnesium	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Manganese	mg/L	**0.089**[ab]	**0.061**[ab]	0.044 J	**0.16**[ab]	**0.27**[b]	**0.25**[b]	**0.23**[b]	**0.32**[b]	**0.43**[b]	**0.29**[b]	**0.33**[b]	**0.38**[b]	**0.32**[b]	**0.26**[b]	**0.2**[b]	**0.19**[b]	**0.41**[b]
Manganese (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mercury	mg/L	0.04 U	0.0002 U	0.04 U	0.0002 U	0.04 U	0.0002 U	0.04 U	0.0002 U	0.04 U	0.0002 U	0.04 U	0.0002 U	0.04 U	0.0002 U	0.04 U	0.0002 U	0.04 U
Mercury (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nickel	mg/L	0.00097 J	0.00045 J	0.00091 J	0.00073 J	0.0025 J	0.0018 J	0.0011 J	0.0028 J	0.002 J	0.02 U	0.024	0.039	0.0062 J	0.0061 J	0.023	0.019 J	0.018 J
Nickel (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Potassium	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Selenium	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.00066 J	0.005 U	0.005 U
Selenium (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Silver	mg/L	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Silver (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sodium	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

TABLE 3.9

PART 201 CRITERIA EXCEEDANCES - GROUNDWATER
2013 RFI REPORT
FORMER GENRERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation		*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*
Aquifier		*Intermediate*	*Intermediate*	*Lower Shallow*	*Lower Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*
Perimeter Status (1)		*Y*	*Y*	*Y*	*Y*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*
Sample Location		*CRA-785I*	*CRA-785I*	*CRA-827ML*	*CRA-827ML*	*CRA-110M*	*CRA-110M*	*CRA-113M*	*CRA-113M*	*CRA-124M*	*CRA-124M*	*CRA-238M*	*CRA-238M*	*CRA-314M*	*CRA-314M*	*CRA-315M*	*CRA-315M*	*CRA-756M*
Sample Identification (GW-17358-)		*042312-CB-1079*	*041013-JY-078*	*041712-CB-1038*	*040813-JY-053*	*041212-CB-1008*	*040913-EM-067*	*041312-CB-1013*	*041113-JY-088*	*041612-CB-1019*	*041113-JY-091*	*041312-CB-1014*	*041113-JY-090*	*041312-CB-1015*	*040913-EM-068*	*041312-CB-1012*	*041113-JY-089*	*041212-DR-1001*
Sample Date		*4/23/2012*	*4/10/2013*	*4/17/2012*	*4/8/2013*	*4/12/2012*	*4/9/2013*	*4/13/2012*	*4/11/2013*	*4/16/2012*	*4/11/2013*	*4/13/2012*	*4/11/2013*	*4/13/2012*	*4/9/2013*	*4/13/2012*	*4/11/2013*	*4/12/2012*
Sample Type																		
Metals Continued																		
Thallium	mg/L	0.00028 J	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.0011 J	0.00048 J	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.00017 J	0.00017 J	0.00032 J
Thallium (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Vanadium	mg/L	0.00068 J	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.0011 J	0.0015 J	0.00076 J	0.004 U	0.0019 J	0.0013 J	0.00059 J	0.00088 J	0.004 U	0.004 U	0.004 U
Vanadium (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Zinc	mg/L	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.007 J
Zinc (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Polychlorinated Biphenyls (PCBs)																		
Aroclor-1016 (PCB-1016)	mg/L	0.0001 U	0.000095 U	0.00011 U	0.000095 U	0.0001 U	0.000095 U	0.000095 U	0.000095 U	0.0001 U	0.000099 U	0.00011 U	0.0001 U	0.0001 U	0.0001 U	0.000095 U	0.000098 U	0.0001 U
Aroclor-1221 (PCB-1221)	mg/L	0.0001 U	0.000095 U	0.00011 U	0.000095 U	0.0001 U	0.000095 U	0.000095 U	0.000095 U	0.0001 U	0.000099 U	0.00011 U	0.0001 U	0.0001 U	0.0001 U	0.000095 U	0.000098 U	0.0001 U
Aroclor-1232 (PCB-1232)	mg/L	0.0001 U	0.000095 U	0.00011 U	0.000095 U	0.0001 U	0.000095 U	0.000095 U	0.000095 U	0.0001 U	0.000099 U	0.00011 U	0.0001 U	0.0001 U	0.0001 U	0.000095 U	0.000098 U	0.0001 U
Aroclor-1242 (PCB-1242)	mg/L	0.0001 U	0.000095 U	0.00011 U	0.000095 U	0.0001 U	0.000095 U	0.000095 U	0.000095 U	0.0001 U	0.000099 U	0.00011 U	0.0001 U	0.0001 U	0.0001 U	0.000095 U	0.000098 U	0.0001 U
Aroclor-1248 (PCB-1248)	mg/L	0.0001 U	0.000095 U	0.00011 U	0.000095 U	0.0001 U	0.000095 U	0.000095 U	0.000095 U	0.0001 U	0.000099 U	0.00011 U	0.0001 U	0.0001 U	0.0001 U	0.000095 U	0.000098 U	0.0001 U
Aroclor-1254 (PCB-1254)	mg/L	0.0001 U	0.000095 U	0.00011 U	0.000095 U	0.0001 U	0.000095 U	0.000095 U	0.000095 U	0.0001 U	0.000099 U	0.00011 U	0.0001 U	0.0001 U	0.0001 U	0.000095 U	0.000098 U	0.0001 U
Aroclor-1260 (PCB-1260)	mg/L	0.0001 U	0.000095 U	0.00011 U	0.000095 U	0.0001 UJ	0.000095 U	0.000095 U	0.000095 U	0.0001 U	0.000099 U	0.00011 U	0.0001 U	0.0001 U	0.0001 U	0.000095 U	0.000098 U	0.0001 UJ
Aroclor-1262 (PCB-1262)	mg/L	0.0001 U	0.000095 U	0.00011 U	0.000095 U	0.0001 U	0.000095 U	0.000095 U	0.000095 U	0.0001 U	0.000099 U	0.00011 U	0.0001 U	0.0001 U	0.0001 U	0.000095 U	0.000098 U	0.0001 U
Aroclor-1268 (PCB-1268)	mg/L	0.0001 U	0.000095 U	0.00011 U	0.000095 U	0.0001 U	0.000095 U	0.000095 U	0.000095 U	0.0001 U	0.000099 U	0.00011 U	0.0001 U	0.0001 U	0.0001 U	0.000095 U	0.000098 U	0.0001 U
Total PCBs	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
General Chemistry																		
Cyanide (amenable)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Phosphorus	mg/L	-	0.036 J	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Field Parameters																		
Turbidity, field	NTU	12.9	3.67	2.99	1.58	4.03	2.67	3.38	3.48	4.93	1.18	0.84	1.71	4.17	4.11	1.09	0.76	4.39

Notes
Michigan Part 201 generic clean up criteria (updated September 28, 2012)
ID - Insufficient data to develop criterion
NLV - Hazardous substance is not likely to volatilize under most conditions
NA - Criterion or value is not available

Perimeter Status (1) - N - non-perimeter, Y - perimeter
mg/L - miligram per liter
NTU - Nephelometric Turbidity Unit

Notes:
U - Not detected at the associated reporting limit.
J - Estimated concentration.
UJ - Not detected; associated reporting limit is estimated.

TABLE 3.9

PART 201 CRITERIA EXCEEDANCES - GROUNDWATER
2013 RFI REPORT
FORMER GENRERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation		*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*
Aquifer		*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Deep*	*Deep*	*Deep*
Perimeter Status (1)		*N*	*N*	*N*	*N*	*N*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*
Sample Location		*CRA-756M*	*CRA-757M*	*CRA-757M*	*CRA-757M*	*CRA-757M*	*CRA-133M*	*CRA-133M*	*CRA-325M*	*CRA-325M*	*CRA-610M*	*CRA-610M*	*CRA-837ML*	*CRA-837ML*	*CRA-704D*	*CRA-704D*	*CRA-704D*
Sample Identification (GW-17358-)		*040813-JY-054*	*041212-DR-1003*	*041212-DR-1004*	*040813-JY-056*	*040813-JY-057*	*041712-CB-1037*	*041013-JY-079*	*041812-EM-1056*	*040813-JY-047*	*041712-CB-1039*	*040813-JY-048*	*041712-CB-1040*	*040213-CT-014*	*042512-JY-1097*	*041013-JY-075*	*041113-DR-085*
Sample Date		*4/8/2013*	*4/12/2012*	*4/12/2012*	*4/8/2013*	*4/8/2013*	*4/17/2012*	*4/10/2013*	*4/18/2012*	*4/8/2013*	*4/17/2012*	*4/8/2013*	*4/17/2012*	*4/2/2013*	*4/25/2012*	*4/10/2013*	*4/11/2013*
Sample Type				*Duplicate*													
Volatile Organic Compounds (VOCs)	***Units***																
1,1,1-Trichloroethane	mg/L	0.0025 U	0.013 UJ	0.013 U	0.033 U	0.033 U	0.001 U	0.001 U	0.0025 U	0.0024	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,1,2,2-Tetrachloroethane	mg/L	0.0025 U	0.013 U	0.013 U	0.033 U	0.033 U	0.001 U	0.001 U	0.0025 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,1,2-Trichloroethane	mg/L	0.0025 U	0.013 U	0.013 U	0.033 U	0.033 U	0.001 U	0.001 U	0.0025 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,1-Dichloroethane	mg/L	0.0025 U	0.013 U	0.013 U	0.033 U	0.033 U	0.001 U	0.001 U	0.0095	0.019	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,1-Dichloroethene	mg/L	0.00052 J	0.013 U	0.013 U	0.033 U	0.033 U	0.001 U	0.001 U	0.0018 J	0.0017	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,2,4-Trichlorobenzene	mg/L	0.0025 U	0.013 U	0.013 U	0.033 U	0.033 U	0.001 U	0.001 U	0.0025 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,2-Dibromo-3-chloropropane (DBCP)	mg/L	0.0025 U	0.013 U	0.013 U	0.033 U	0.033 U	0.001 U	0.001 U	0.0025 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,2-Dibromoethane (Ethylene dibromide)	mg/L	0.0025 U	0.013 U	0.013 U	0.033 U	0.033 U	0.001 U	0.001 U	0.0025 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,2-Dichlorobenzene	mg/L	0.0025 U	0.013 U	0.013 U	0.033 U	0.033 U	0.001 U	0.001 U	0.0025 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,2-Dichloroethane	mg/L	0.0025 U	0.013 U	0.013 U	0.033 U	0.033 U	0.001 U	0.001 U	0.0025 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,2-Dichloropropane	mg/L	0.0017 J	0.013 U	0.013 U	0.033 U	0.033 U	0.001 U	0.001 U	0.0025 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,3-Dichlorobenzene	mg/L	0.0025 U	0.013 U	0.013 U	0.033 U	0.033 U	0.001 U	0.001 U	0.0025 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,4-Dichlorobenzene	mg/L	0.0025 U	0.013 U	0.013 U	0.033 U	0.033 U	0.001 U	0.001 U	0.0025 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
2-Butanone (Methyl ethyl ketone) (MEK)	mg/L	0.025 U	0.13 U	0.13 U	0.33 U	0.33 U	0.01 U	0.01 U	0.01 J	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.00091 J	0.00077 J	0.01 U
2-Hexanone	mg/L	0.025 U	0.13 U	0.13 U	0.33 U	0.33 U	0.01 U	0.01 U	0.025 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	mg/L	0.025 U	0.13 U	0.13 U	0.33 U	0.33 U	0.01 U	0.01 U	0.025 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Acetone	mg/L	0.025 U	0.13 U	0.13 U	0.33 U	0.33 U	0.01 U	0.01 U	0.14	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.004 J	0.0011 J
Benzene	mg/L	0.0025 U	0.013 U	0.013 U	0.033 U	0.033 U	0.001 U	0.001 U	0.0025 U	0.001 U	0.001 U	0.00013 J	0.001 U	0.001 U	0.00033 J	0.00084 J	0.00026 J
Bromodichloromethane	mg/L	0.0025 U	0.013 U	0.013 U	0.033 U	0.033 U	0.001 U	0.001 U	0.0025 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Bromoform	mg/L	0.0025 U	0.013 U	0.013 U	0.033 U	0.033 U	0.001 U	0.001 U	0.0025 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Bromomethane (Methyl bromide)	mg/L	0.0025 U	0.013 U	0.013 U	0.033 U	0.033 U	0.001 U	0.001 U	0.0025 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Carbon disulfide	mg/L	0.00033 J	0.063 U	0.063 U	0.17 U	0.17 U	0.005 U	0.005 U	0.013 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.001 J	0.00069 J	0.0011 J
Carbon tetrachloride	mg/L	0.0025 U	0.013 U	0.013 U	0.033 U	0.033 U	0.001 U	0.001 U	0.0025 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Chlorobenzene	mg/L	0.0025 U	0.013 U	0.013 U	0.033 U	0.033 U	0.001 U	0.001 U	0.0025 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Chloroethane	mg/L	0.0025 U	0.013 U	0.013 U	0.033 U	0.033 U	0.001 U	0.001 U	0.02	0.00055 J	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Chloroform (Trichloromethane)	mg/L	0.0025 U	0.013 U	0.013 U	0.033 U	0.033 U	0.001 U	0.001 U	0.0025 U	0.001 U	0.001 U	0.001 U	0.00061 J	0.001 U	0.00061 J	0.001 U	0.001 U
Chloromethane (Methyl chloride)	mg/L	0.0025 U	0.013 U	0.013 U	0.033 U	0.033 U	0.001 U	0.001 U	0.0025 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
cis-1,2-Dichloroethene	mg/L	0.024	0.013 U	0.013 U	0.033 U	0.033 U	0.001 U	0.001 U	0.017	0.013	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
cis-1,3-Dichloropropene	mg/L	0.0025 U	0.013 U	0.013 U	0.033 U	0.033 U	0.001 U	0.001 U	0.0025 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Cyclohexane	mg/L	0.0025 U	0.013 U	0.013 U	0.033 U	0.033 U	0.001 U	0.001 U	0.0025 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Dibromochloromethane	mg/L	0.0025 U	0.013 U	0.013 U	0.033 U	0.033 U	0.001 U	0.001 U	0.0025 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Dichlorodifluoromethane (CFC-12)	mg/L	0.0025 U	0.013 U	0.013 U	0.033 U	0.033 U	0.001 U	0.001 U	0.0025 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Ethylbenzene	mg/L	0.0025 U	0.013 U	0.013 U	0.033 U	0.033 U	0.001 U	0.001 U	0.0025 U	0.001 U	0.001 U	0.0017	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Isopropyl benzene	mg/L	0.0025 U	0.013 U	0.013 U	0.033 U	0.033 U	0.001 U	0.001 U	0.0025 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Methyl acetate	mg/L	0.025 U	0.13 U	0.13 U	0.33 U	0.33 U	0.01 U	0.01 U	0.025 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Methyl cyclohexane	mg/L	0.0025 U	0.013 U	0.013 U	0.033 U	0.033 U	0.001 U	0.001 U	0.0025 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Methyl tert butyl ether (MTBE)	mg/L	0.0025 U	0.063 U	0.063 U	0.033 U	0.033 U	0.005 U	0.001 U	0.013 U	0.001 U	0.005 U	0.001 U	0.005 U	0.001 U	0.005 U	0.001 U	0.001 U
Methylene chloride	mg/L	0.013 U	0.063 U	0.063 U	0.17 U	0.17 U	0.005 U	0.005 U	0.013 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Styrene	mg/L	0.0025 U	0.013 U	0.013 U	0.033 U	0.033 U	0.001 U	0.001 U	0.0025 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Tetrachloroethene	mg/L	**0.077**[bc]	0.013 U	0.013 U	0.033 U	0.033 U	0.001 U	0.001 U	0.0025 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Toluene	mg/L	0.0025 U	0.013 U	0.013 U	0.033 U	0.033 U	0.001 U	0.001 U	0.0025 U	0.001 U	0.001 U	0.00022 J	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
trans-1,2-Dichloroethene	mg/L	0.01	0.013 U	0.013 U	0.033 U	0.033 U	0.001 U	0.001 U	0.0025	0.0013	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
trans-1,3-Dichloropropene	mg/L	0.0025 U	0.013 U	0.013 U	0.033 U	0.033 U	0.001 U	0.001 U	0.0025 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Trichloroethene	mg/L	**0.0068**[b]	0.013 U	0.013 U	0.033 U	0.033 U	0.001 U	0.001 U	0.0025 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Trichlorofluoromethane (CFC-11)	mg/L	0.0025 U	0.013 U	0.013 U	0.033 U	0.033 U	0.001 U	0.001 U	0.0025 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Trifluorotrichloroethane (Freon 113)	mg/L	0.0025 U	0.013 U	0.013 U	0.033 U	0.033 U	0.001 U	0.001 U	0.0025 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Vinyl chloride	mg/L	0.00068 J	**0.71**[bc]	**0.75**[bc]	**0.97**[bc]	**0.95**[bc]	0.001 U	0.001 U	0.0025 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Xylenes (total)	mg/L	0.005 U	0.025 U	0.025 U	0.067 U	0.067 U	0.002 U	0.002 U	0.005 U	0.002 U	0.002 U	0.0073	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U

TABLE 3.9

PART 201 CRITERIA EXCEEDANCES - GROUNDWATER
2013 RFI REPORT
FORMER GENRERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation		*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*
Aquifier		*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Deep*	*Deep*	*Deep*
Perimeter Status (1)		*N*	*N*	*N*	*N*	*N*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*
Sample Location		*CRA-756M*	*CRA-757M*	*CRA-757M*	*CRA-757M*	*CRA-757M*	*CRA-133M*	*CRA-133M*	*CRA-325M*	*CRA-325M*	*CRA-610M*	*CRA-610M*	*CRA-837ML*	*CRA-837ML*	*CRA-704D*	*CRA-704D*	*CRA-704D*
Sample Identification (GW-17358-)		*040813-JY-054*	*041212-DR-1003*	*041212-DR-1004*	*040813-JY-056*	*040813-JY-057*	*041712-CB-1037*	*041013-JY-079*	*041812-EM-1056*	*040813-JY-047*	*041712-CB-1039*	*040813-JY-048*	*041712-CB-1040*	*040213-CT-014*	*042512-JY-1097*	*041013-JY-075*	*041113-DR-085*
Sample Date		*4/8/2013*	*4/12/2012*	*4/12/2012*	*4/8/2013*	*4/8/2013*	*4/17/2012*	*4/10/2013*	*4/18/2012*	*4/8/2013*	*4/17/2012*	*4/8/2013*	*4/17/2012*	*4/2/2013*	*4/25/2012*	*4/10/2013*	*4/11/2013*
Sample Type				*Duplicate*													
Semi-Volatile Organic Compounds (SVOCs)																	
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	mg/L	0.012 U	0.0051 U	0.0052 U	0.0048 U	0.0048 U	0.005 U	0.0048 U	0.005 U	0.005 U	0.0053 U	0.0048 U	0.0053 U	0.0048 U	0.0049 U	0.005 U	0.0052 U
2,4,5-Trichlorophenol	mg/L	0.012 U	0.0051 U	0.0052 U	0.0048 U	0.0048 U	0.005 U	0.0048 U	0.005 U	0.005 U	0.0053 U	0.0048 U	0.0053 U	0.0048 U	0.0049 U	0.005 U	0.0052 U
2,4,6-Trichlorophenol	mg/L	0.0095 U	0.0041 U	0.0041 U	0.0038 U	0.0038 U	0.004 U	0.0038 U	0.004 U	0.004 U	0.0043 U	0.0038 U	0.0042 U	0.0038 U	0.0039 U	0.004 U	0.0042 U
2,4-Dichlorophenol	mg/L	0.024 U	0.01 U	0.01 U	0.0095 U	0.0095 U	0.01 U	0.0095 U	0.0099 U	0.01 U	0.011 U	0.0095 U	0.011 U	0.0096 U	0.0097 U	0.01 U	0.01 U
2,4-Dimethylphenol	mg/L	0.012 U	0.0051 U	0.0052 U	0.0048 U	0.0048 U	0.005 U	0.0048 U	0.005 U	0.005 U	0.0053 U	0.0048 U	0.0053 U	0.0048 U	0.0049 U	0.005 U	0.0052 U
2,4-Dinitrophenol	mg/L	0.048 U	0.02 U	0.021 U	0.019 U	0.019 U	0.02 U	0.019 U	0.02 U	0.02 U	0.021 U	0.019 U	0.021 U	0.019 U	0.019 U	0.02 U	0.021 U
2,4-Dinitrotoluene	mg/L	0.012 U	0.0051 U	0.0052 U	0.0048 U	0.0048 U	0.005 U	0.0048 U	0.005 U	0.005 U	0.0053 U	0.0048 U	0.0053 U	0.0048 U	0.0049 U	0.005 U	0.0052 U
2,6-Dinitrotoluene	mg/L	0.012 U	0.0051 U	0.0052 U	0.0048 U	0.0048 U	0.005 U	0.0048 U	0.005 U	0.005 U	0.0053 U	0.0048 U	0.0053 U	0.0048 U	0.0049 U	0.005 U	0.0052 U
2-Chloronaphthalene	mg/L	0.012 U	0.0051 U	0.0052 U	0.0048 U	0.0048 U	0.005 U	0.0048 U	0.005 U	0.005 U	0.0053 U	0.0048 U	0.0053 U	0.0048 U	0.0049 U	0.005 U	0.0052 U
2-Chlorophenol	mg/L	0.012 U	0.0051 U	0.0052 U	0.0048 U	0.0048 U	0.005 U	0.0048 U	0.005 U	0.005 U	0.0053 U	0.0048 U	0.0053 U	0.0048 U	0.0049 U	0.005 U	0.0052 U
2-Methylnaphthalene	mg/L	0.012 U	0.0051 U	0.0052 U	0.0048 U	0.0048 U	0.005 U	0.0048 U	0.005 U	0.005 U	0.0053 U	0.0048 U	0.0053 U	0.0048 U	0.0049 U	0.005 U	0.0052 U
2-Methylphenol	mg/L	0.012 U	0.0051 U	0.0052 U	0.0048 U	0.0048 U	0.005 U	0.0048 U	0.005 U	0.005 U	0.0053 U	0.0048 U	0.0053 U	0.0048 U	0.0049 U	0.005 U	0.0052 U
2-Nitroaniline	mg/L	0.048 U	0.02 U	0.021 U	0.019 U	0.019 U	0.02 U	0.019 U	0.02 U	0.02 U	0.021 U	0.019 U	0.021 U	0.019 U	0.019 U	0.02 U	0.021 U
2-Nitrophenol	mg/L	0.012 U	0.0051 U	0.0052 U	0.0048 U	0.0048 U	0.005 U	0.0048 U	0.005 U	0.005 U	0.0053 U	0.0048 U	0.0053 U	0.0048 U	0.0049 U	0.005 U	0.0052 U
3&4-Methylphenol	mg/L	0.012 U	0.0051 U	0.0052 U	0.0048 U	0.0048 U	0.005 U	0.0048 U	0.005 U	0.005 U	0.0053 U	0.0048 U	0.0053 U	0.0048 U	0.0049 U	0.005 U	0.0014 J
3,3'-Dichlorobenzidine	mg/L	0.0024 U	0.001 U	0.001 U	0.00095 U	0.00095 U	0.001 U	0.00095 U	0.00099 U	0.001 U	0.0011 U	0.00095 U	0.0011 U	0.00096 U	0.00097 U	0.001 U	0.001 U
3-Nitroaniline	mg/L	0.048 U	0.02 U	0.021 U	0.019 U	0.019 U	0.02 U	0.019 U	0.02 U	0.02 U	0.021 U	0.019 U	0.021 U	0.019 U	0.019 U	0.02 U	0.021 U
4,6-Dinitro-2-methylphenol	mg/L	0.048 U	0.02 U	0.021 U	0.019 U	0.019 U	0.02 U	0.019 U	0.02 U	0.02 U	0.021 U	0.019 U	0.021 U	0.019 U	0.019 U	0.02 U	0.021 U
4-Bromophenyl phenyl ether	mg/L	0.012 U	0.0051 U	0.0052 U	0.0048 U	0.0048 U	0.005 U	0.0048 U	0.005 U	0.005 U	0.0053 U	0.0048 U	0.0053 U	0.0048 U	0.0049 U	0.005 U	0.0052 U
4-Chloro-3-methylphenol	mg/L	0.012 U	0.0051 U	0.0052 U	0.0048 U	0.0048 U	0.005 U	0.0048 U	0.005 U	0.005 U	0.0053 U	0.0048 U	0.0053 U	0.0048 U	0.0049 U	0.005 U	0.0052 U
4-Chloroaniline	mg/L	0.024 U	0.01 U	0.01 U	0.0095 U	0.0095 U	0.01 U	0.0095 U	0.0099 U	0.01 U	0.011 U	0.0095 U	0.011 U	0.0096 U	0.0097 U	0.01 U	0.01 U
4-Chlorophenyl phenyl ether	mg/L	0.012 U	0.0051 U	0.0052 U	0.0048 U	0.0048 U	0.005 U	0.0048 U	0.005 U	0.005 U	0.0053 U	0.0048 U	0.0053 U	0.0048 U	0.0049 U	0.005 U	0.0052 U
4-Nitroaniline	mg/L	0.048 U	0.02 U	0.021 U	0.019 U	0.019 U	0.02 U	0.019 U	0.02 U	0.02 U	0.021 U	0.019 U	0.021 U	0.019 U	0.019 U	0.02 U	0.021 U
4-Nitrophenol	mg/L	0.048 U	0.02 U	0.021 U	0.019 U	0.019 U	0.02 U	0.019 U	0.02 U	0.02 U	0.021 U	0.019 U	0.021 U	0.019 U	0.019 U	0.02 U	0.021 U
Acenaphthene	mg/L	0.012 U	0.0051 U	0.0052 U	0.0048 U	0.0048 U	0.005 U	0.0048 U	0.005 U	0.005 U	0.0053 U	0.0048 U	0.0053 U	0.0048 U	0.0049 U	0.005 U	0.0052 U
Acenaphthylene	mg/L	0.012 U	0.0051 U	0.0052 U	0.0048 U	0.0048 U	0.005 U	0.0048 U	0.005 U	0.005 U	0.0053 U	0.0048 U	0.0053 U	0.0048 U	0.0049 U	0.005 U	0.0052 U
Acetophenone	mg/L	0.012 U	0.0051 U	0.0052 U	0.0048 U	0.0048 U	0.005 U	0.0048 U	0.005 U	0.005 U	0.0053 U	0.0048 U	0.0053 U	0.0048 U	0.0049 U	0.005 U	0.0052 U
Anthracene	mg/L	0.012 U	0.0051 U	0.0052 U	0.0048 U	0.0048 U	0.005 U	0.0048 U	0.005 U	0.005 U	0.0053 U	0.0048 U	0.0053 U	0.0048 U	0.0049 U	0.005 U	0.0052 U
Atrazine	mg/L	0.0071 U	0.0031 U	0.0031 U	0.0029 U	0.0029 U	0.003 U	0.0029 U	0.003 U	0.003 U	0.0032 U	0.0029 U	0.0032 U	0.0029 U	0.0029 U	0.003 U	0.0031 U
Benzaldehyde	mg/L	0.012 U	0.0051 U	0.0052 U	0.0048 U	0.0048 U	0.005 U	0.0048 U	0.005 U	0.005 U	0.0053 U	0.0048 U	0.0053 U	0.0048 U	0.0049 U	0.005 U	0.0052 U
Benzo(a)anthracene	mg/L	0.0024 U	0.001 U	0.001 U	0.00095 U	0.00095 U	0.001 U	0.00095 U	0.00099 U	0.001 U	0.0011 U	0.00095 U	0.0011 U	0.00096 U	0.00097 U	0.001 U	0.001 U
Benzo(a)pyrene	mg/L	0.0024 U	0.001 U	0.001 U	0.00095 U	0.00095 U	0.001 U	0.00095 U	0.00099 U	0.001 U	0.0011 U	0.00095 U	0.0011 U	0.00096 U	0.00097 U	0.001 U	0.001 U
Benzo(b)fluoranthene	mg/L	0.0024 U	0.001 U	0.001 U	0.00095 U	0.00095 U	0.001 U	0.00095 U	0.00099 U	0.001 U	0.0011 U	0.00095 U	0.0011 U	0.00096 U	0.00097 U	0.001 U	0.001 U
Benzo(g,h,i)perylene	mg/L	0.0024 U	0.001 U	0.001 U	0.00095 U	0.00095 U	0.001 U	0.00095 U	0.00099 U	0.001 U	0.0011 U	0.00095 U	0.0011 U	0.00096 U	0.00097 U	0.001 U	0.001 U
Benzo(k)fluoranthene	mg/L	0.0024 U	0.001 U	0.001 U	0.00095 U	0.00095 U	0.001 U	0.00095 U	0.00099 U	0.001 U	0.0011 U	0.00095 U	0.0011 U	0.00096 U	0.00097 U	0.001 U	0.001 U
Biphenyl (1,1-Biphenyl)	mg/L	0.012 U	0.0051 U	0.0052 U	0.0048 U	0.0048 U	0.005 U	0.0048 U	0.005 U	0.005 U	0.0053 U	0.0048 U	0.0053 U	0.0048 U	0.0049 U	0.005 U	0.0052 U
bis(2-Chloroethoxy)methane	mg/L	0.012 U	0.0051 U	0.0052 U	0.0048 U	0.0048 U	0.005 U	0.0048 U	0.005 U	0.005 U	0.0053 U	0.0048 U	0.0053 U	0.0048 U	0.0049 U	0.005 U	0.0052 U
bis(2-Chloroethyl)ether	mg/L	0.0024 U	0.001 U	0.001 U	0.00095 U	0.00095 U	0.001 U	0.00095 U	0.00099 U	0.001 U	0.0011 U	0.00095 U	0.0011 U	0.00096 U	0.00097 U	0.001 U	0.001 U
bis(2-Ethylhexyl)phthalate (DEHP)	mg/L	0.012 U	0.00088 J	0.00082 J	0.0048 U	0.0048 U	0.005 U	0.0048 U	0.005 U	0.005 U	0.0053 U	0.0048 U	0.0053 U	0.0066 U	0.0049 U	0.005 U	0.0052 U
Butyl benzylphthalate (BBP)	mg/L	0.012 U	0.0051 U	0.0052 U	0.0048 U	0.0048 U	0.005 U	0.0048 U	0.005 U	0.00095 J	0.0053 U	0.00091 J	0.0053 U	0.0048 U	0.0049 U	0.005 U	0.0052 U
Caprolactam	mg/L	0.024 U	0.01 U	0.01 U	0.0095 U	0.0095 U	0.01 U	0.0095 U	0.0099 U	0.01 U	0.011 U	0.0095 U	0.011 U	0.0096 U	0.0019 J	0.01 U	0.0078 J
Carbazole	mg/L	0.024 U	0.01 U	0.01 U	0.0095 U	0.0095 U	0.01 U	0.0095 U	0.0099 U	0.01 U	0.011 U	0.0095 U	0.011 U	0.0096 U	0.0097 U	0.01 U	0.01 U
Chrysene	mg/L	0.0024 U	0.001 U	0.001 U	0.00095 U	0.00095 U	0.001 U	0.00095 U	0.00099 U	0.001 U	0.0011 U	0.00095 U	0.0011 U	0.00096 U	0.00097 U	0.001 U	0.001 U
Dibenz(a,h)anthracene	mg/L	0.0048 U	0.002 U	0.0021 U	0.0019 U	0.0019 U	0.002 U	0.0019 U	0.002 U	0.002 U	0.0021 U	0.0019 U	0.0021 U	0.0019 U	0.0019 U	0.002 U	0.0021 U
Dibenzofuran	mg/L	0.0095 U	0.0041 U	0.0041 U	0.0038 U	0.0038 U	0.004 U	0.0038 U	0.004 U	0.004 U	0.0043 U	0.0038 U	0.0042 U	0.0038 U	0.0039 U	0.004 U	0.0042 U
Diethyl phthalate	mg/L	0.012 U	0.0051 U	0.0052 U	0.0048 U	0.0048 U	0.005 U	0.0048 U	0.005 U	0.005 U	0.0053 U	0.0048 U	0.0053 U	0.0048 U	0.0049 U	0.005 U	0.0052 U
Dimethyl phthalate	mg/L	0.012 U	0.0051 U	0.0052 U	0.0048 U	0.0048 U	0.005 U	0.0048 U	0.005 U	0.005 U	0.0053 U	0.0048 U	0.0053 U	0.0048 U	0.0049 U	0.005 U	0.0052 U
Di-n-butylphthalate (DBP)	mg/L	0.012 U	0.0051 U	0.0052 U	0.0048 U	0.0048 U	0.005 U	0.0048 U	0.005 U	0.005 U	0.0053 U	0.0048 U	0.0053 U	0.0048 U	0.0049 U	0.005 U	0.0052 U
Di-n-octyl phthalate (DnOP)	mg/L	0.012 U	0.0051 U	0.0052 U	0.0048 U	0.0048 U	0.005 U	0.0048 U	0.005 U	0.005 U	0.0053 U	0.0048 U	0.0053 U	0.0048 U	0.0049 U	0.005 U	0.0052 U
Fluoranthene	mg/L	0.0024 U	0.001 U	0.001 U	0.00095 U	0.00095 U	0.001 U	0.00095 U	0.00099 U	0.001 U	0.0011 U	0.00095 U	0.0011 U	0.00096 U	0.00097 U	0.001 U	0.001 U
Fluorene	mg/L	0.012 U	0.0051 U	0.0052 U	0.0048 U	0.0048 U	0.005 U	0.0048 U	0.005 U	0.005 U	0.0053 U	0.0048 U	0.0053 U	0.0048 U	0.0049 U	0.005 U	0.0052 U
Hexachlorobenzene	mg/L	0.00048 U	0.0002 U	0.00021 U	0.00019 U	0.00019 U	0.0002 U	0.00019 U	0.0002 U	0.0002 U	0.00021 U	0.00019 U	0.00021 U	0.00019 U	0.00019 U	0.0002 U	0.00021 U

TABLE 3.9

PART 201 CRITERIA EXCEEDANCES - GROUNDWATER
2013 RFI REPORT
FORMER GENRERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation		*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*
Aquifer		*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Deep*	*Deep*	*Deep*
Perimeter Status (1)		*N*	*N*	*N*	*N*	*N*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*
Sample Location		*CRA-756M*	*CRA-757M*	*CRA-757M*	*CRA-757M*	*CRA-757M*	*CRA-133M*	*CRA-133M*	*CRA-325M*	*CRA-325M*	*CRA-610M*	*CRA-610M*	*CRA-837ML*	*CRA-837ML*	*CRA-704D*	*CRA-704D*	*CRA-704D*
Sample Identification (GW-17358-)		*040813-JY-054*	*041212-DR-1003*	*041212-DR-1004*	*040813-JY-056*	*040813-JY-057*	*041712-CB-1037*	*041013-JY-079*	*041812-EM-1056*	*040813-JY-047*	*041712-CB-1039*	*040813-JY-048*	*041712-CB-1040*	*040213-CT-014*	*042512-JY-1097*	*041013-JY-075*	*041113-DR-085*
Sample Date		*4/8/2013*	*4/12/2012*	*4/12/2012*	*4/8/2013*	*4/8/2013*	*4/17/2012*	*4/10/2013*	*4/18/2012*	*4/8/2013*	*4/17/2012*	*4/8/2013*	*4/17/2012*	*4/2/2013*	*4/25/2012*	*4/10/2013*	*4/11/2013*
Sample Type				*Duplicate*													
SVOCs Continued																	
Hexachlorobutadiene	mg/L	0.0024 U	0.001 U	0.001 U	0.00095 U	0.00095 U	0.001 U	0.00095 U	0.00099 U	0.001 U	0.0011 U	0.00095 U	0.0011 U	0.00096 U	0.00097 U	0.001 U	0.001 U
Hexachlorocyclopentadiene	mg/L	R	0.0051 U	0.0052 U	R	R	0.005 U	0.0048 U	0.005 U	R	0.0053 U	R	0.0053 U	0.0048 U	0.0049 U	0.005 U	0.0052 U
Hexachloroethane	mg/L	0.012 U	0.0051 U	0.0052 U	0.0048 U	0.0048 U	0.005 U	0.0048 U	0.005 U	0.005 U	0.0053 U	0.0048 U	0.0053 U	0.0048 U	0.0049 U	0.005 U	0.0052 U
Indeno(1,2,3-cd)pyrene	mg/L	0.0048 U	0.002 U	0.0021 U	0.0019 U	0.0019 U	0.002 U	0.0019 U	0.002 U	0.002 U	0.0021 U	0.0019 U	0.0021 U	0.0019 U	0.0019 U	0.002 U	0.0021 U
Isophorone	mg/L	0.012 U	0.0051 U	0.0052 U	0.0048 U	0.0048 U	0.005 U	0.0048 U	0.005 U	0.005 U	0.0053 U	0.0048 U	0.0053 U	0.0048 U	0.0049 U	0.005 U	0.0052 U
Naphthalene	mg/L	0.012 U	0.0051 U	0.0052 U	0.0048 U	0.0048 U	0.005 U	0.00039 J	0.005 U	0.005 U	0.0053 U	0.0048 U	0.0053 U	0.0048 U	0.0049 U	0.00013 J	0.0052 U
Nitrobenzene	mg/L	0.0071 U	0.0031 U	0.0031 U	0.0029 U	0.0029 U	0.003 U	0.0029 U	0.003 U	0.003 U	0.0032 U	0.0029 U	0.0032 U	0.0029 U	0.0029 U	0.003 U	0.0031 U
N-Nitrosodi-n-propylamine	mg/L	0.012 U	0.0051 U	0.0052 U	0.0048 U	0.0048 U	0.005 U	0.0048 U	0.005 U	0.005 U	0.0053 U	0.0048 U	0.0053 U	0.0048 U	0.0049 U	0.005 U	0.0052 U
N-Nitrosodiphenylamine	mg/L	0.012 U	0.0051 U	0.0052 U	0.0048 U	0.0048 U	0.005 U	0.0048 U	0.005 U	0.005 U	0.0053 U	0.0048 U	0.0053 U	0.0048 U	0.0049 U	0.005 U	0.0052 U
Pentachlorophenol	mg/L	0.012 U	0.0051 U	0.0052 U	0.0048 U	0.0048 U	0.005 U	0.0048 U	0.005 U	0.005 U	0.0053 U	0.0048 U	0.0053 U	0.0048 U	0.0049 U	0.005 U	0.0052 U
Phenanthrene	mg/L	0.0048 U	0.002 U	0.0021 U	0.0019 U	0.0019 U	0.002 U	0.0019 U	0.002 U	0.002 U	0.0021 U	0.0019 U	0.0021 U	0.0019 U	0.0019 U	0.002 U	0.0021 U
Phenol	mg/L	0.012 U	0.0051 U	0.0052 U	0.0048 U	0.0048 U	0.005 U	0.0048 U	0.005 U	0.005 U	0.0053 U	0.0013 J	0.0053 U	0.0048 U	0.0049 U	0.0035 J	0.0036 J
Pyrene	mg/L	0.012 U	0.0051 U	0.0052 U	0.0048 U	0.0048 U	0.005 U	0.0048 U	0.005 U	0.005 U	0.0053 U	0.0048 U	0.0053 U	0.0048 U	0.0049 U	0.005 U	0.0052 U
Metals																	
Aluminum	mg/L	0.02 J	0.046 J	**0.057[b]**	0.019 J	0.02 J	0.05 U	0.05 U	0.05 U	0.022 J	**3[ab]**	**0.15[ab]**	**0.27[ab]**	**0.15[ab]**	**16[ab]**	**1.2[ab]**	**1.4 J[ab]**
Aluminum (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.032 J
Antimony	mg/L	0.002 U	0.00016 J	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.001 J	0.002 U	0.00054 J	0.002 U	0.0015 J	0.002 U	0.002 U
Antimony (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.002 U
Arsenic	mg/L	**0.065[bc]**	0.0087	0.0091	**0.013[bc]**	**0.015[bc]**	0.0042 J	0.0038 J	**0.014[abc]**	0.0066	0.0022 J	0.005 U	0.0066	**0.012[abc]**	0.0072	0.0038 J	0.0052
Arsenic (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0026 J
Barium	mg/L	0.15	0.19	0.19	0.24	0.25	0.19	0.26	0.052 J	0.073 J	0.016 J	0.007 J	0.076 J	0.1	0.15	0.059 J	0.047 J
Barium (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.054 J
Beryllium	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0007 J	0.001 U	0.001 U
Beryllium (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.001 U
Cadmium	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Cadmium (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.001 U
Calcium	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chromium	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.00086 J	0.01 U	0.01 U	0.01 U	0.01 U	0.0041 J	0.0011 J	0.01 U	0.01 U	**0.019[c]**	0.0023 J	0.0026 J
Chromium (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00075 J
Chromium III (trivalent)	mg/L	-	0.01 U	0.01 U	-	-	-	-	-	-	-	-	-	-	-	-	-
Chromium VI (hexavalent)	mg/L	-	0.0074 J	0.0086 J	-	-	-	-	-	-	-	-	-	-	-	-	-
Cobalt	mg/L	0.0024 J	0.0035 J	0.0035 J	0.0018 J	0.0019 J	0.00019 J	0.0015 J	0.0029 J	0.0035 J	0.00087 J	0.00035 J	0.00011 J	0.00016 J	0.0051 J	0.00053 J	0.00069 J
Cobalt (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.000099 J
Copper	mg/L	0.004 U	0.004 U	0.004 U	0.00034 J	0.004 U	0.004 U	0.004 U	0.00082 J	0.00068 J	0.009	0.0031 J	0.004 U	0.0007 J	0.011	0.004 U	0.004 U
Copper (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.004 U
Iron	mg/L	**15[b]**	**5.4[b]**	**5.3[b]**	**7[b]**	**7.7[b]**	**3.5[ab]**	**3[ab]**	**9.6[ab]**	**5.1[ab]**	**2.7[ab]**	0.15 J	0.18 J	**5.8[ab]**	**12[ab]**	**1.4[ab]**	**1.4[ab]**
Iron (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.2 U
Lead	mg/L	0.003 U	0.00027 J	0.003 U	0.00026 J	0.00022 J	0.0003 J	0.00045 J	0.003 U	0.00023 J	0.0016 J	0.00038 J	0.003 U	0.0003 J	**0.0045[ab]**	0.00092 J	0.00099 J
Lead (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.003 U
Magnesium	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Manganese	mg/L	**0.33[b]**	**0.85[b]**	**0.83[b]**	**0.74[b]**	**0.8[b]**	**0.39[ab]**	**0.56[ab]**	**0.34[ab]**	**0.41[ab]**	0.018 J	0.031 J	**0.071[ab]**	**0.16[ab]**	**0.15[ab]**	**0.06[ab]**	0.037 J
Manganese (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.042 J
Mercury	mg/L	0.0002 U	0.04 U	0.04 U	0.0002 U	0.0002 U	0.04 U	0.0002 U	0.04 U	0.0002 U	0.04 U	0.0002 U	0.04 U	0.0002 U	0.08 U	0.0002 U	0.0002 U
Mercury (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0002 U
Nickel	mg/L	0.016 J	0.022	0.021	0.016 J	0.017 J	0.0011 J	0.0044 J	0.0043 J	0.0048 J	0.0039 J	0.0011 J	0.0022 J	0.00079 J	0.016 J	0.004 J	0.0021 J
Nickel (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0017 J
Potassium	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Selenium	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.00087 J	0.0013 J	0.005 U	0.005 U	0.00099 J	0.005 U	0.005 U
Selenium (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.005 U
Silver	mg/L	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Silver (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0002 U
Sodium	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

TABLE 3.9

PART 201 CRITERIA EXCEEDANCES - GROUNDWATER
2013 RFI REPORT
FORMER GENRERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation		*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*
Aquifer		*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Deep*	*Deep*	*Deep*
Perimeter Status (1)		*N*	*N*	*N*	*N*	*N*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*
Sample Location		*CRA-756M*	*CRA-757M*	*CRA-757M*	*CRA-757M*	*CRA-757M*	*CRA-133M*	*CRA-133M*	*CRA-325M*	*CRA-325M*	*CRA-610M*	*CRA-610M*	*CRA-837ML*	*CRA-837ML*	*CRA-704D*	*CRA-704D*	*CRA-704D*
Sample Identification (GW-17358-)		*040813-JY-054*	*041212-DR-1003*	*041212-DR-1004*	*040813-JY-056*	*040813-JY-057*	*041712-CB-1037*	*041013-JY-079*	*041812-EM-1056*	*040813-JY-047*	*041712-CB-1039*	*040813-JY-048*	*041712-CB-1040*	*040213-CT-014*	*042512-JY-1097*	*041013-JY-075*	*041113-DR-085*
Sample Date		*4/8/2013*	*4/12/2012*	*4/12/2012*	*4/8/2013*	*4/8/2013*	*4/17/2012*	*4/10/2013*	*4/18/2012*	*4/8/2013*	*4/17/2012*	*4/8/2013*	*4/17/2012*	*4/2/2013*	*4/25/2012*	*4/10/2013*	*4/11/2013*
Sample Type				*Duplicate*													
Metals Continued																	
Thallium	mg/L	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.00037 J	0.002 U	0.0002 J
Thallium (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00027 J
Vanadium	mg/L	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	**0.0083[a]**	0.00099 J	0.0035 J	0.00054 J	**0.036[ac]**	0.0029 J	0.0034 J
Vanadium (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.004 U
Zinc	mg/L	0.05 U	0.0046 J	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.051 U	0.05 U
Zinc (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.05 U
Polychlorinated Biphenyls (PCBs)																	
Aroclor-1016 (PCB-1016)	mg/L	0.000095 U	0.000099 U	0.0001 U	0.000096 U	0.000096 U	0.0001 U	0.000095 U	0.000098 U	0.000096 U	0.000095 U	0.000095 U	0.00011 U	0.000095 U	0.000095 U	0.0001 U	0.0001 U
Aroclor-1221 (PCB-1221)	mg/L	0.000095 U	0.000099 U	0.0001 U	0.000096 U	0.000096 U	0.0001 U	0.000095 U	0.000098 U	0.000096 U	0.000095 U	0.000095 U	0.00011 U	0.000095 U	0.000095 U	0.0001 U	0.0001 U
Aroclor-1232 (PCB-1232)	mg/L	0.000095 U	0.000099 U	0.0001 U	0.000096 U	0.000096 U	0.0001 U	0.000095 U	0.000098 U	0.000096 U	0.000095 U	0.000095 U	0.00011 U	0.000095 U	0.000095 U	0.0001 U	0.0001 U
Aroclor-1242 (PCB-1242)	mg/L	0.000095 U	0.000099 U	0.0001 U	0.000096 U	0.000096 U	0.0001 U	0.000095 U	0.000098 U	0.000096 U	0.000095 U	0.000095 U	0.00011 U	0.000095 U	0.000095 U	0.0001 U	0.0001 U
Aroclor-1248 (PCB-1248)	mg/L	0.000095 U	0.000099 U	0.0001 U	0.000096 U	0.000096 U	0.0001 U	0.000095 U	0.000098 U	0.000096 U	0.000095 U	0.000095 U	0.00011 U	0.000095 U	0.000095 U	0.0001 U	0.0001 U
Aroclor-1254 (PCB-1254)	mg/L	0.000095 U	0.000099 U	0.0001 U	0.000096 U	0.000096 U	0.0001 U	0.000095 U	0.000098 U	0.000096 U	0.000095 U	0.000095 U	0.00011 U	0.000095 U	0.000036 J	0.0001 U	R
Aroclor-1260 (PCB-1260)	mg/L	0.000095 U	0.000099 UJ	0.0001 UJ	0.000096 U	0.000096 U	0.0001 U	0.000095 U	0.000098 U	0.000096 U	0.000095 U	0.000095 U	0.00011 U	0.000095 U	0.000095 U	0.0001 U	R
Aroclor-1262 (PCB-1262)	mg/L	0.000095 U	0.000099 U	0.0001 U	0.000096 U	0.000096 U	0.0001 U	0.000095 U	0.000098 U	0.000096 U	0.000095 U	0.000095 U	0.00011 U	0.000095 U	0.000095 U	0.0001 U	R
Aroclor-1268 (PCB-1268)	mg/L	0.000095 U	0.000099 U	0.0001 U	0.000096 U	0.000096 U	0.0001 U	0.000095 U	0.000098 U	0.000096 U	0.000095 U	0.000095 U	0.00011 U	0.000095 U	0.000095 U	0.0001 U	R
Total PCBs	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.000036 J	ND	ND
General Chemistry																	
Cyanide (amenable)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Phosphorus	mg/L	0.078 J	-	-	-	-	-	0.1 U	-	-	-	-	-	0.036 J	-	0.06 J	0.1
Field Parameters																	
Turbidity, field	NTU	1.92	4.82	4.82	4.57	4.57	4.56	3.48	1.21	3.87	40.6	3.24	8.35	15.1	289	40.8	40.3

Notes
Michigan Part 201 generic clean up criteria (updated September 28, 2012)
ID - Insufficient data to develop criterion
NLV - Hazardous substance is not likely to volatilize under most conditions
NA - Criterion or value is not available

Perimeter Status (1) - N - non-perimeter, Y - perimeter
mg/L - miligram per liter
NTU - Nephelometric Turbidity Unit

Notes:
U - Not detected at the associated reporting limit.
J - Estimated concentration.
UJ - Not detected; associated reporting limit is estimated.

TABLE 3.9

PART 201 CRITERIA EXCEEDANCES - GROUNDWATER
2013 RFI REPORT
FORMER GENRERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation		*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*
Aquifier		*Intermediate*	*Intermediate*	*Intermediate*	*Intermediate*	*Intermediate*	*Intermediate*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*
Perimeter Status (1)		*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*
Sample Location		*CRA-703I*	*CRA-703I*	*CRA-703I*	*CRA-703I*	*CRA-704I*	*CRA-704I*	*CRA-264M*	*CRA-264M*	*CRA-264M*	*CRA-266M*	*CRA-701M*	*CRA-701M*
Sample Identification (GW-17358-)		*042012-JY-1069*	*080312-CB-004*	*080312-CB-005*	*041213-EM-095*	*042512-JY-1098*	*041013-JY-074*	*012312-DR-027*	*012312-DR-028*	*041713-DR-116*	*012312-DR-029*	*042012-JY-1070*	*080712-BW-007*
Sample Date		*4/20/2012*	*8/3/2012*	*8/3/2012*	*4/12/2013*	*4/25/2012*	*4/10/2013*	*1/23/2012*	*1/23/2012*	*4/17/2013*	*1/23/2012*	*4/20/2012*	*8/7/2012*
Sample Type				*Duplicate*					*Duplicate*				
Volatile Organic Compounds (VOCs)	***Units***												
1,1,1-Trichloroethane	mg/L	0.001 U	-	-	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	-
1,1,2,2-Tetrachloroethane	mg/L	0.001 U	-	-	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	-
1,1,2-Trichloroethane	mg/L	0.001 U	-	-	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	-
1,1-Dichloroethane	mg/L	0.001 U	-	-	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	-
1,1-Dichloroethene	mg/L	0.001 U	-	-	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	-
1,2,4-Trichlorobenzene	mg/L	0.001 U	-	-	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	-
1,2-Dibromo-3-chloropropane (DBCP)	mg/L	0.001 U	-	-	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	-
1,2-Dibromoethane (Ethylene dibromide)	mg/L	0.001 U	-	-	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	-
1,2-Dichlorobenzene	mg/L	0.001 U	-	-	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	-
1,2-Dichloroethane	mg/L	0.001 U	-	-	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	-
1,2-Dichloropropane	mg/L	0.001 U	-	-	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	-
1,3-Dichlorobenzene	mg/L	0.001 U	-	-	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	-
1,4-Dichlorobenzene	mg/L	0.001 U	-	-	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	-
2-Butanone (Methyl ethyl ketone) (MEK)	mg/L	0.01 U	-	-	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	-
2-Hexanone	mg/L	0.01 U	-	-	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	-
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	mg/L	0.01 U	-	-	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	-
Acetone	mg/L	0.01 U	-	-	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	-
Benzene	mg/L	0.001 U	-	-	0.001 U	0.00021 J	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	-
Bromodichloromethane	mg/L	0.001 U	-	-	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	-
Bromoform	mg/L	0.001 U	-	-	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	-
Bromomethane (Methyl bromide)	mg/L	0.001 U	-	-	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	-
Carbon disulfide	mg/L	0.005 U	-	-	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.00014 J	-
Carbon tetrachloride	mg/L	0.001 U	-	-	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	-
Chlorobenzene	mg/L	0.001 U	-	-	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	-
Chloroethane	mg/L	0.001 U	-	-	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	-
Chloroform (Trichloromethane)	mg/L	0.001 U	-	-	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	-
Chloromethane (Methyl chloride)	mg/L	0.001 U	-	-	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	-
cis-1,2-Dichloroethene	mg/L	0.001 U	-	-	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	-
cis-1,3-Dichloropropene	mg/L	0.001 U	-	-	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	-
Cyclohexane	mg/L	0.001 U	-	-	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	-
Dibromochloromethane	mg/L	0.001 U	-	-	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	-
Dichlorodifluoromethane (CFC-12)	mg/L	0.001 U	-	-	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	-
Ethylbenzene	mg/L	0.001 U	-	-	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	-
Isopropyl benzene	mg/L	0.001 U	-	-	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	-
Methyl acetate	mg/L	0.01 U	-	-	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	-
Methyl cyclohexane	mg/L	0.001 U	-	-	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	-
Methyl tert butyl ether (MTBE)	mg/L	0.005 U	-	-	0.001 U	0.005 U	0.001 U	0.005 U	0.005 U	0.001 U	0.005 U	0.005 U	-
Methylene chloride	mg/L	0.005 U	-	-	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	-
Styrene	mg/L	0.001 U	-	-	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	-
Tetrachloroethene	mg/L	0.001 U	-	-	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	-
Toluene	mg/L	0.001 U	-	-	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	-
trans-1,2-Dichloroethene	mg/L	0.001 U	-	-	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	-
trans-1,3-Dichloropropene	mg/L	0.001 U	-	-	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	-
Trichloroethene	mg/L	0.001 U	-	-	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	-
Trichlorofluoromethane (CFC-11)	mg/L	0.001 U	-	-	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	-
Trifluorotrichloroethane (Freon 113)	mg/L	0.001 U	-	-	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	-
Vinyl chloride	mg/L	0.001 U	-	-	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	-
Xylenes (total)	mg/L	0.002 U	-	-	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	-

TABLE 3.9

PART 201 CRITERIA EXCEEDANCES - GROUNDWATER
2013 RFI REPORT
FORMER GENRERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation		*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*
Aquifier		*Intermediate*	*Intermediate*	*Intermediate*	*Intermediate*	*Intermediate*	*Intermediate*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*
Perimeter Status (1)		*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*
Sample Location		*CRA-703I*	*CRA-703I*	*CRA-703I*	*CRA-703I*	*CRA-704I*	*CRA-704I*	*CRA-264M*	*CRA-264M*	*CRA-264M*	*CRA-266M*	*CRA-701M*	*CRA-701M*
Sample Identification (GW-17358-)		*042012-JY-1069*	*080312-CB-004*	*080312-CB-005*	*041213-EM-095*	*042512-JY-1098*	*041013-JY-074*	*012312-DR-027*	*012312-DR-028*	*041713-DR-116*	*012312-DR-029*	*042012-JY-1070*	*080712-BW-007*
Sample Date		*4/20/2012*	*8/3/2012*	*8/3/2012*	*4/12/2013*	*4/25/2012*	*4/10/2013*	*1/23/2012*	*1/23/2012*	*4/17/2013*	*1/23/2012*	*4/20/2012*	*8/7/2012*
Sample Type				*Duplicate*					*Duplicate*				
Semi-Volatile Organic Compounds (SVOCs)													
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	mg/L	0.0049 U	-	-	0.0049 U	0.0049 U	0.0048 U	0.0054 U	0.0053 U	0.0051 U	0.0052 U	0.0048 U	-
2,4,5-Trichlorophenol	mg/L	0.0049 U	-	-	0.0049 U	0.0049 U	0.0048 U	0.0054 U	0.0053 U	0.0051 U	0.0052 U	0.0048 U	-
2,4,6-Trichlorophenol	mg/L	0.0039 U	-	-	0.0039 U	0.0039 U	0.0038 U	0.0043 U	0.0043 U	0.004 U	0.0042 U	0.0038 U	-
2,4-Dichlorophenol	mg/L	0.0098 U	-	-	0.0098 U	0.0098 U	0.0095 U	0.011 U	0.011 U	0.01 U	0.01 U	0.0095 U	-
2,4-Dimethylphenol	mg/L	0.0049 U	-	-	0.0049 U	0.0049 U	0.0048 U	0.0054 U	0.0053 U	0.0051 U	0.0052 U	0.0048 U	-
2,4-Dinitrophenol	mg/L	0.02 U	-	-	0.02 U	0.02 U	0.019 U	0.022 U	0.021 U	0.02 U	0.021 U	0.019 U	-
2,4-Dinitrotoluene	mg/L	0.0049 U	-	-	0.0049 U	0.0049 U	0.0048 U	0.0054 U	0.0053 U	0.0051 U	0.0052 U	0.0048 U	-
2,6-Dinitrotoluene	mg/L	0.0049 U	-	-	0.0049 U	0.0049 U	0.0048 U	0.0054 U	0.0053 U	0.0051 U	0.0052 U	0.0048 U	-
2-Chloronaphthalene	mg/L	0.0049 U	-	-	0.0049 U	0.0049 U	0.0048 U	0.0054 U	0.0053 U	0.0051 U	0.0052 U	0.0048 U	-
2-Chlorophenol	mg/L	0.0049 U	-	-	0.0049 U	0.0049 U	0.0048 U	0.0054 U	0.0053 U	0.0051 U	0.0052 U	0.0048 U	-
2-Methylnaphthalene	mg/L	0.0049 U	-	-	0.0049 U	0.0049 U	0.0048 U	0.0054 U	0.0053 U	0.0051 U	0.0052 U	0.0048 U	-
2-Methylphenol	mg/L	0.0049 U	-	-	0.0049 U	0.0049 U	0.0048 U	0.0054 U	0.0053 U	0.0051 U	0.0052 U	0.0048 U	-
2-Nitroaniline	mg/L	0.02 U	-	-	0.02 U	0.02 U	0.019 U	0.022 U	0.021 U	0.02 U	0.021 U	0.019 U	-
2-Nitrophenol	mg/L	0.0049 U	-	-	0.0049 U	0.0049 U	0.0048 U	0.0054 U	0.0053 U	0.0051 U	0.0052 U	0.0048 U	-
3&4-Methylphenol	mg/L	0.0049 U	-	-	0.0049 U	0.0049 U	0.0048 U	0.0054 U	0.0053 U	0.0051 U	0.0052 U	0.0048 U	-
3,3'-Dichlorobenzidine	mg/L	0.00098 U	-	-	0.00098 U	0.00098 U	0.00095 U	0.0011 U	0.0011 U	0.001 U	0.001 U	0.00095 U	-
3-Nitroaniline	mg/L	0.02 U	-	-	0.02 U	0.02 U	0.019 U	0.022 U	0.021 U	0.02 U	0.021 U	0.019 U	-
4,6-Dinitro-2-methylphenol	mg/L	0.02 U	-	-	0.02 U	0.02 U	0.019 U	0.022 U	0.021 U	0.02 U	0.021 U	0.019 U	-
4-Bromophenyl phenyl ether	mg/L	0.0049 U	-	-	0.0049 U	0.0049 U	0.0048 U	0.0054 U	0.0053 U	0.0051 U	0.0052 U	0.0048 U	-
4-Chloro-3-methylphenol	mg/L	0.0049 U	-	-	0.0049 U	0.0049 U	0.0048 U	0.0054 U	0.0053 U	0.0051 U	0.0052 U	0.0048 U	-
4-Chloroaniline	mg/L	0.0098 U	-	-	0.0098 U	0.0098 U	0.0095 U	0.011 U	0.011 U	0.01 U	0.01 U	0.0095 U	-
4-Chlorophenyl phenyl ether	mg/L	0.0049 U	-	-	0.0049 U	0.0049 U	0.0048 U	0.0054 U	0.0053 U	0.0051 U	0.0052 U	0.0048 U	-
4-Nitroaniline	mg/L	0.02 U	-	-	0.02 U	0.02 U	0.019 U	0.022 U	0.021 U	0.02 U	0.021 U	0.019 U	-
4-Nitrophenol	mg/L	0.02 U	-	-	0.02 U	0.02 U	0.019 U	0.022 U	0.021 U	0.02 U	0.021 U	0.019 U	-
Acenaphthene	mg/L	0.0049 U	-	-	0.0049 U	0.0049 U	0.0048 U	0.0054 U	0.0053 U	0.0051 U	0.0052 U	0.0048 U	-
Acenaphthylene	mg/L	0.0049 U	-	-	0.0049 U	0.0049 U	0.0048 U	0.0054 U	0.0053 U	0.0051 U	0.0052 U	0.0048 U	-
Acetophenone	mg/L	0.0049 U	-	-	0.0049 U	0.0049 U	0.0048 U	0.0054 U	0.0053 U	0.0051 U	0.0052 U	0.0048 U	-
Anthracene	mg/L	0.0049 U	-	-	0.0049 U	0.0049 U	0.0048 U	0.0054 U	0.0053 U	0.0051 U	0.0052 U	0.0048 U	-
Atrazine	mg/L	0.0029 U	-	-	0.0029 U	0.0029 U	0.0029 U	0.0032 U	0.0032 U	0.003 U	0.0031 U	0.0029 U	-
Benzaldehyde	mg/L	0.0049 U	-	-	0.0049 U	0.0049 U	0.0048 U	0.0054 U	0.0053 U	0.0051 U	0.0052 U	0.0048 U	-
Benzo(a)anthracene	mg/L	0.00098 U	-	-	0.00098 U	0.00098 U	0.00095 U	0.0011 U	0.0011 U	0.001 U	0.001 U	0.00095 U	-
Benzo(a)pyrene	mg/L	0.00098 U	-	-	0.00098 U	0.00098 U	0.00095 U	0.0011 U	0.0011 U	0.001 U	0.001 U	0.00095 U	-
Benzo(b)fluoranthene	mg/L	0.00098 U	-	-	0.00098 U	0.00098 U	0.00095 U	0.0011 U	0.0011 U	0.001 U	0.001 U	0.00095 U	-
Benzo(g,h,i)perylene	mg/L	0.00098 U	-	-	0.00098 U	0.00098 U	0.00095 U	0.0011 U	0.0011 U	0.001 U	0.001 U	0.00095 U	-
Benzo(k)fluoranthene	mg/L	0.00098 U	-	-	0.00098 U	0.00098 U	0.00095 U	0.0011 U	0.0011 U	0.001 U	0.001 U	0.00095 U	-
Biphenyl (1,1-Biphenyl)	mg/L	0.0049 U	-	-	0.0049 U	0.0049 U	0.0048 U	0.0054 U	0.0053 U	0.0051 U	0.0052 U	0.0048 U	-
bis(2-Chloroethoxy)methane	mg/L	0.0049 U	-	-	0.0049 U	0.0049 U	0.0048 U	0.0054 U	0.0053 U	0.0051 U	0.0052 U	0.0048 U	-
bis(2-Chloroethyl)ether	mg/L	0.00098 U	-	-	0.00098 U	0.00098 U	0.00095 U	0.0011 U	0.0011 U	0.001 U	0.001 U	0.00095 U	-
bis(2-Ethylhexyl)phthalate (DEHP)	mg/L	0.0049 U	-	-	0.0049 U	0.0049 U	0.0048 U	0.0054 U	0.0053 U	0.0051 U	0.0052 U	0.0048 U	-
Butyl benzylphthalate (BBP)	mg/L	0.0049 U	-	-	0.0049 U	0.0049 U	0.0048 U	0.0054 U	0.0053 U	0.0051 U	0.0052 U	0.0048 U	-
Caprolactam	mg/L	0.0098 U	-	-	0.0098 U	0.0098 U	0.0015 J	0.011 U	0.011 U	0.01 U	0.01 U	0.0095 U	-
Carbazole	mg/L	0.0098 U	-	-	0.0098 U	0.0098 U	0.0095 U	0.011 U	0.011 U	0.01 U	0.01 U	0.0095 U	-
Chrysene	mg/L	0.00098 U	-	-	0.00098 U	0.00098 U	0.00095 U	0.0011 U	0.0011 U	0.001 U	0.001 U	0.00095 U	-
Dibenz(a,h)anthracene	mg/L	0.002 U	-	-	0.002 U	0.002 U	0.0019 U	0.0022 U	0.0021 U	0.002 U	0.0021 U	0.0019 U	-
Dibenzofuran	mg/L	0.0039 U	-	-	0.0039 U	0.0039 U	0.0038 U	0.0043 U	0.0043 U	0.004 U	0.0042 U	0.0038 U	-
Diethyl phthalate	mg/L	0.0049 U	-	-	0.0049 U	0.0049 U	0.0048 U	0.0054 U	0.0053 U	0.0051 U	0.0052 U	0.0048 U	-
Dimethyl phthalate	mg/L	0.0049 U	-	-	0.0049 U	0.0049 U	0.0048 U	0.0054 U	0.0053 U	0.0051 U	0.0052 U	0.0048 U	-
Di-n-butylphthalate (DBP)	mg/L	0.0049 U	-	-	0.0049 U	0.0049 U	0.0048 U	0.0054 U	0.0053 U	0.0051 U	0.0052 U	0.0048 U	-
Di-n-octyl phthalate (DnOP)	mg/L	0.0049 U	-	-	0.0049 U	0.0049 U	0.0048 U	0.0054 U	0.0053 U	0.0051 U	0.0052 U	0.0048 U	-
Fluoranthene	mg/L	0.00098 U	-	-	0.00098 U	0.00098 U	0.00095 U	0.0011 U	0.0011 U	0.001 U	0.001 U	0.00095 U	-
Fluorene	mg/L	0.0049 U	-	-	0.0049 U	0.0049 U	0.0048 U	0.0054 U	0.0053 U	0.0051 U	0.0052 U	0.0048 U	-
Hexachlorobenzene	mg/L	0.0002 U	-	-	0.0002 U	0.0002 U	0.00019 U	0.00022 U	0.00021 U	0.0002 U	0.00021 U	0.00019 U	-

TABLE 3.9

PART 201 CRITERIA EXCEEDANCES - GROUNDWATER
2013 RFI REPORT
FORMER GENRERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation		*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*
Aquifier		*Intermediate*	*Intermediate*	*Intermediate*	*Intermediate*	*Intermediate*	*Intermediate*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*
Perimeter Status (1)		*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*
Sample Location		*CRA-703I*	*CRA-703I*	*CRA-703I*	*CRA-703I*	*CRA-704I*	*CRA-704I*	*CRA-264M*	*CRA-264M*	*CRA-264M*	*CRA-266M*	*CRA-701M*	*CRA-701M*
Sample Identification (GW-17358-)		*042012-JY-1069*	*080312-CB-004*	*080312-CB-005*	*041213-EM-095*	*042512-JY-1098*	*041013-JY-074*	*012312-DR-027*	*012312-DR-028*	*041713-DR-116*	*012312-DR-029*	*042012-JY-1070*	*080712-BW-007*
Sample Date		*4/20/2012*	*8/3/2012*	*8/3/2012*	*4/12/2013*	*4/25/2012*	*4/10/2013*	*1/23/2012*	*1/23/2012*	*4/17/2013*	*1/23/2012*	*4/20/2012*	*8/7/2012*
Sample Type				*Duplicate*					*Duplicate*				
SVOCs Continued													
Hexachlorobutadiene	mg/L	0.00098 U	-	-	0.00098 U	0.00098 U	0.00095 U	0.0011 U	0.0011 U	0.001 U	0.001 U	0.00095 U	-
Hexachlorocyclopentadiene	mg/L	0.0049 U	-	-	0.0049 U	0.0049 U	0.0048 U	0.0054 U	0.0053 U	R	0.0052 U	0.0048 U	-
Hexachloroethane	mg/L	0.0049 U	-	-	0.0049 U	0.0049 U	0.0048 U	0.0054 U	0.0053 U	0.0051 U	0.0052 U	0.0048 U	-
Indeno(1,2,3-cd)pyrene	mg/L	0.002 U	-	-	0.002 U	0.002 U	0.0019 U	0.0022 U	0.0021 U	0.002 U	0.0021 U	0.0019 U	-
Isophorone	mg/L	0.0049 U	-	-	0.0049 U	0.0049 U	0.0048 U	0.0054 U	0.0053 U	0.0051 U	0.0052 U	0.0048 U	-
Naphthalene	mg/L	0.0049 U	-	-	0.0049 U	0.0049 U	0.0048 U	0.0054 U	0.0053 U	0.0051 U	0.0052 U	0.0048 U	-
Nitrobenzene	mg/L	0.0029 U	-	-	0.0029 U	0.0029 U	0.0029 U	0.0032 U	0.0032 U	0.003 U	0.0031 U	0.0029 U	-
N-Nitrosodi-n-propylamine	mg/L	0.0049 U	-	-	0.0049 U	0.0049 U	0.0048 U	0.0054 U	0.0053 U	0.0051 U	0.0052 U	0.0048 U	-
N-Nitrosodiphenylamine	mg/L	0.0049 U	-	-	0.0049 U	0.0049 U	0.0048 U	0.0054 U	0.0053 U	0.0051 U	0.0052 U	0.0048 U	-
Pentachlorophenol	mg/L	0.0049 U	-	-	0.0049 U	0.0049 U	0.0048 U	0.0054 U	0.0053 U	0.0051 U	0.0052 U	0.0048 U	-
Phenanthrene	mg/L	0.002 U	-	-	0.002 U	0.002 U	0.0019 U	0.0022 U	0.0021 U	0.002 U	0.0021 U	0.0019 U	-
Phenol	mg/L	0.0049 U	-	-	0.0049 U	0.0049 U	0.0048 U	0.0054 U	0.0053 U	0.0051 U	0.0052 U	0.0048 U	-
Pyrene	mg/L	0.0049 U	-	-	0.0049 U	0.0049 U	0.0048 U	0.0054 U	0.0053 U	0.0051 U	0.0052 U	0.0048 U	-
Metals													
Aluminum	mg/L	0.027 J	0.05 U	0.05 U	0.05 U	**0.41**[ab]	0.03 J	0.027 J	0.02 J	0.05 U	0.042 J	0.05 U	**5.5**[ab]
Aluminum (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Antimony	mg/L	0.0002 J	0.002 U	0.002 U	0.002 U	0.00068 J	0.002 U	0.00014 J	0.00013 J	0.002 U	0.00019 J	0.00036 J	0.00033 J
Antimony (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Arsenic	mg/L	**0.013**[abc]	**0.022**[abc]	**0.023**[abc]	**0.016**[abc]	**0.011**[abc]	0.0095	0.00088 J	0.00081 J	0.005 U	0.0045 J	0.00079 J	0.007
Arsenic (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Barium	mg/L	0.45	0.48	0.48	0.48	0.42	0.41	0.058 J	0.064 J	0.081 J	0.023 J	0.089 J	0.13
Barium (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Beryllium	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Beryllium (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Cadmium	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Cadmium (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Calcium	mg/L	170	-	-	-	-	-	-	-	-	-	120	-
Chromium	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.009 J
Chromium (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Chromium III (trivalent)	mg/L	-	-	-	-	-	-	-	-	-	-	0.01 U	-
Chromium VI (hexavalent)	mg/L	-	-	-	-	-	-	-	-	-	-	0.01 U	-
Cobalt	mg/L	0.00035 J	0.02 U	0.02 U	0.000022 J	0.0012 J	0.00031 J	0.0004 J	0.0004 J	0.02 U	0.00017 J	0.00033 J	0.0048 J
Cobalt (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Copper	mg/L	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.0095
Copper (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Iron	mg/L	**2**[ab]	**3.6**[ab]	**3.6**[ab]	**2.7**[ab]	**0.79**[ab]	**0.52**[ab]	**0.54**[ab]	**0.54**[ab]	**0.44**[ab]	0.15 J	0.2 U	**9.4**[ab]
Iron (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Lead	mg/L	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.0018 J	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	**0.0058**[ab]
Lead (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Magnesium	mg/L	41	-	-	-	-	-	-	-	-	-	22	-
Manganese	mg/L	**0.15**[ab]	**0.13**[ab]	**0.13**[ab]	**0.12**[ab]	**0.21**[ab]	**0.11**[ab]	**0.2**[ab]	**0.2**[ab]	**0.19**[ab]	**0.06**[ab]	**0.13**[ab]	**0.48**[ab]
Manganese (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Mercury	mg/L	0.04 U	0.0002 U	0.0002 U	0.0002 U	0.04 U	0.0002 U	0.04 U	0.04 U	0.0002 U	0.04 U	0.04 U	0.0002 U
Mercury (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Nickel	mg/L	0.001 J	0.00031 J	0.02 U	0.02 U	0.0029 J	0.0013 J	0.0012 J	0.0012 J	0.02 U	0.0016 J	0.0021 J	0.011 J
Nickel (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Potassium	mg/L	2.2 J	-	-	-	-	-	-	-	-	-	2.6 J	-
Selenium	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.0014 J	0.00097 J	0.0013 J	0.005 U	0.005 U	0.005 U
Selenium (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Silver	mg/L	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Silver (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Sodium	mg/L	**230**[a]	-	-	-	-	-	-	-	-	-	120	-

TABLE 3.9

PART 201 CRITERIA EXCEEDANCES - GROUNDWATER
2013 RFI REPORT
FORMER GENRERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation		*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*
Aquifier		*Intermediate*	*Intermediate*	*Intermediate*	*Intermediate*	*Intermediate*	*Intermediate*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*
Perimeter Status (1)		*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*
Sample Location		*CRA-703I*	*CRA-703I*	*CRA-703I*	*CRA-703I*	*CRA-704I*	*CRA-704I*	*CRA-264M*	*CRA-264M*	*CRA-264M*	*CRA-266M*	*CRA-701M*	*CRA-701M*
Sample Identification (GW-17358-)		*042012-JY-1069*	*080312-CB-004*	*080312-CB-005*	*041213-EM-095*	*042512-JY-1098*	*041013-JY-074*	*012312-DR-027*	*012312-DR-028*	*041713-DR-116*	*012312-DR-029*	*042012-JY-1070*	*080712-BW-007*
Sample Date		*4/20/2012*	*8/3/2012*	*8/3/2012*	*4/12/2013*	*4/25/2012*	*4/10/2013*	*1/23/2012*	*1/23/2012*	*4/17/2013*	*1/23/2012*	*4/20/2012*	*8/7/2012*
Sample Type				*Duplicate*					*Duplicate*				
Metals Continued													
Thallium	mg/L	0.002 U	0.002 U	0.002 U	0.002 U	0.00019 J	0.002 U	0.00016 J	0.00014 J	0.002 U	0.002 U	0.002 U	0.002 U
Thallium (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Vanadium	mg/L	0.004 U	0.004 U	0.004 U	0.004 U	0.0014 J	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	**0.014**[a]
Vanadium (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Zinc	mg/L	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Zinc (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Polychlorinated Biphenyls (PCBs)													
Aroclor-1016 (PCB-1016)	mg/L	0.000095 U	-	-	0.000098 U	0.0001 U	0.000095 U	0.00011 U	0.0001 U	0.0001 U	0.000099 U	0.000095 U	-
Aroclor-1221 (PCB-1221)	mg/L	0.000095 U	-	-	0.000098 U	0.0001 U	0.000095 U	0.00011 U	0.0001 U	0.0001 U	0.000099 U	0.000095 U	-
Aroclor-1232 (PCB-1232)	mg/L	0.000095 U	-	-	0.000098 U	0.0001 U	0.000095 U	0.00011 U	0.0001 U	0.0001 U	0.000099 U	0.000095 U	-
Aroclor-1242 (PCB-1242)	mg/L	0.000095 U	-	-	0.000098 U	0.0001 U	0.000095 U	0.00011 U	0.0001 U	0.0001 U	0.000099 U	0.000095 U	-
Aroclor-1248 (PCB-1248)	mg/L	0.000095 U	-	-	0.000098 U	0.0001 U	0.000095 U	0.00011 U	0.0001 U	0.0001 U	0.000099 U	0.000095 U	-
Aroclor-1254 (PCB-1254)	mg/L	0.000095 U	-	-	0.000098 U	0.0001 U	0.000095 U	0.00011 U	0.0001 U	0.0001 U	0.000099 U	0.000095 U	-
Aroclor-1260 (PCB-1260)	mg/L	0.000095 U	-	-	0.000098 U	0.0001 U	0.000095 U	0.00011 U	0.0001 U	0.0001 U	0.000099 U	0.000095 U	-
Aroclor-1262 (PCB-1262)	mg/L	0.000095 U	-	-	0.000098 U	0.0001 U	0.000095 U	-	-	0.0001 U	-	0.000095 U	-
Aroclor-1268 (PCB-1268)	mg/L	0.000095 U	-	-	0.000098 U	0.0001 U	0.000095 U	-	-	0.0001 U	-	0.000095 U	-
Total PCBs	mg/L	ND	-	-	ND	ND	ND	ND	ND	ND	ND	ND	-
General Chemistry													
Cyanide (amenable)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Phosphorus	mg/L	-	-	-	0.1 U	-	0.1 U	-	-	0.1 U	-	-	-
Field Parameters													
Turbidity, field	NTU	6.63	3.17	3.17	4.59	18.6	3.05	4.72	4.72	1.65	4.01	2.63	42.4

Notes
Michigan Part 201 generic clean up criteria (updated September 28, 2012)
ID - Insufficient data to develop criterion
NLV - Hazardous substance is not likely to volatilize under most conditions
NA - Criterion or value is not available

Perimeter Status (1) - N - non-perimeter, Y - perimeter
mg/L - miligram per liter
NTU - Nephelometric Turbidity Unit

Notes:
U - Not detected at the associated reporting limit.
J - Estimated concentration.
UJ - Not detected; associated reporting limit is estimated.

TABLE 3.9

PART 201 CRITERIA EXCEEDANCES - GROUNDWATER
2013 RFI REPORT
FORMER GENRERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation		*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*
Aquifier		*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*
Perimeter Status (1)		*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*
Sample Location		*CRA-701M*	*CRA-703M*	*CRA-703M*	*CRA-703M*	*CRA-703M*	*CRA-704M*	*CRA-704M*	*CRA-704M*	*CRA-705M*	*CRA-705M*	*CRA-705M*	*CRA-706M*
Sample Identification (GW-17358-)		*041213-EM-101*	*042012-JY-1067*	*042012-JY-1068*	*080312-CB-006*	*041213-EM-096*	*042512-JY-1096*	*080312-CB-003*	*041013-JY-076*	*012412-DR-031*	*080312-CB-001*	*041613-DR-115*	*012412-DR-030*
Sample Date		*4/12/2013*	*4/20/2012*	*4/20/2012*	*8/3/2012*	*4/12/2013*	*4/25/2012*	*8/3/2012*	*4/10/2013*	*1/24/2012*	*8/3/2012*	*4/16/2013*	*1/24/2012*
Sample Type				*Duplicate*									
Volatile Organic Compounds (VOCs)	***Units***												
1,1,1-Trichloroethane	mg/L	0.001 U	0.001 U	0.001 U	-	0.001 U	0.001 U	-	0.001 U	0.001 U	-	0.001 U	0.001 U
1,1,2,2-Tetrachloroethane	mg/L	0.001 U	0.001 U	0.001 U	-	0.001 U	0.001 U	-	0.001 U	0.001 U	-	0.001 U	0.001 U
1,1,2-Trichloroethane	mg/L	0.001 U	0.001 U	0.001 U	-	0.001 U	0.001 U	-	0.001 U	0.001 U	-	0.001 U	0.001 U
1,1-Dichloroethane	mg/L	0.001 U	0.001 U	0.001 U	-	0.001 U	0.001 U	-	0.001 U	0.001 U	-	0.001 U	0.001 U
1,1-Dichloroethene	mg/L	0.001 U	0.001 U	0.001 U	-	0.001 U	0.001 U	-	0.001 U	0.001 U	-	0.001 U	0.001 U
1,2,4-Trichlorobenzene	mg/L	0.001 U	0.001 U	0.001 U	-	0.001 U	0.001 U	-	0.001 U	0.001 U	-	0.001 U	0.001 U
1,2-Dibromo-3-chloropropane (DBCP)	mg/L	0.001 U	0.001 U	0.001 U	-	0.001 U	0.001 U	-	0.001 U	0.001 U	-	0.001 U	0.001 U
1,2-Dibromoethane (Ethylene dibromide)	mg/L	0.001 U	0.001 U	0.001 U	-	0.001 U	0.001 U	-	0.001 U	0.001 U	-	0.001 U	0.001 U
1,2-Dichlorobenzene	mg/L	0.001 U	0.001 U	0.001 U	-	0.001 U	0.001 U	-	0.001 U	0.001 U	-	0.001 U	0.001 U
1,2-Dichloroethane	mg/L	0.001 U	0.001 U	0.001 U	-	0.001 U	0.001 U	-	0.001 U	0.001 U	-	0.001 U	0.001 U
1,2-Dichloropropane	mg/L	0.001 U	0.001 U	0.001 U	-	0.001 U	0.001 U	-	0.001 U	0.001 U	-	0.001 U	0.001 U
1,3-Dichlorobenzene	mg/L	0.001 U	0.001 U	0.001 U	-	0.001 U	0.001 U	-	0.001 U	0.001 U	-	0.001 U	0.001 U
1,4-Dichlorobenzene	mg/L	0.001 U	0.001 U	0.001 U	-	0.001 U	0.001 U	-	0.001 U	0.001 U	-	0.001 U	0.001 U
2-Butanone (Methyl ethyl ketone) (MEK)	mg/L	0.01 U	0.01 U	0.01 U	-	0.01 U	0.01 U	-	0.01 U	0.01 U	-	0.01 U	0.01 U
2-Hexanone	mg/L	0.01 U	0.01 U	0.01 U	-	0.01 U	0.01 U	-	0.01 U	0.01 U	-	0.01 U	0.01 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	mg/L	0.01 U	0.01 U	0.01 U	-	0.01 U	0.01 U	-	0.01 U	0.01 U	-	0.01 U	0.01 U
Acetone	mg/L	0.01 U	0.01 U	0.01 U	-	0.01 U	0.01 U	-	0.01 U	0.01 U	-	0.01 U	0.01 U
Benzene	mg/L	0.001 U	0.001 U	0.001 U	-	0.001 U	0.001 U	-	0.001 U	0.001 U	-	0.001 U	0.001 U
Bromodichloromethane	mg/L	0.001 U	0.001 U	0.001 U	-	0.001 U	0.001 U	-	0.001 U	0.001 U	-	0.001 U	0.001 U
Bromoform	mg/L	0.001 U	0.001 U	0.001 U	-	0.001 U	0.001 U	-	0.001 U	0.001 U	-	0.001 U	0.001 U
Bromomethane (Methyl bromide)	mg/L	0.001 U	0.001 U	0.001 U	-	0.001 U	0.001 U	-	0.001 U	0.001 U	-	0.001 U	0.001 U
Carbon disulfide	mg/L	0.005 U	0.005 U	0.005 U	-	0.005 U	0.005 U	-	0.005 U	0.005 U	-	0.005 U	0.005 U
Carbon tetrachloride	mg/L	0.001 U	0.001 U	0.001 U	-	0.001 U	0.001 U	-	0.001 U	0.001 U	-	0.001 U	0.001 U
Chlorobenzene	mg/L	0.001 U	0.001 U	0.001 U	-	0.001 U	0.001 U	-	0.001 U	0.001 U	-	0.001 U	0.001 U
Chloroethane	mg/L	0.001 U	0.001 U	0.001 U	-	0.001 U	0.001 U	-	0.001 U	0.001 U	-	0.001 U	0.001 U
Chloroform (Trichloromethane)	mg/L	0.001 U	0.001 U	0.001 U	-	0.001 U	0.001 U	-	0.001 U	0.001 U	-	0.001 U	0.001 U
Chloromethane (Methyl chloride)	mg/L	0.001 U	0.001 U	0.001 U	-	0.001 U	0.001 U	-	0.001 U	0.001 U	-	0.001 U	0.001 U
cis-1,2-Dichloroethene	mg/L	0.001 U	0.001 U	0.001 U	-	0.001 U	0.001 U	-	0.001 U	0.001 U	-	0.001 U	0.001 U
cis-1,3-Dichloropropene	mg/L	0.001 U	0.001 U	0.001 U	-	0.001 U	0.001 U	-	0.001 U	0.001 U	-	0.001 U	0.001 U
Cyclohexane	mg/L	0.001 U	0.001 U	0.001 U	-	0.001 U	0.001 U	-	0.001 U	0.001 U	-	0.001 U	0.001 U
Dibromochloromethane	mg/L	0.001 U	0.001 U	0.001 U	-	0.001 U	0.001 U	-	0.001 U	0.001 U	-	0.001 U	0.001 U
Dichlorodifluoromethane (CFC-12)	mg/L	0.001 U	0.001 U	0.001 U	-	0.001 U	0.001 U	-	0.001 U	0.001 U	-	0.001 U	0.001 U
Ethylbenzene	mg/L	0.001 U	0.001 U	0.001 U	-	0.001 U	0.001 U	-	0.001 U	0.001 U	-	0.001 U	0.001 U
Isopropyl benzene	mg/L	0.001 U	0.001 U	0.001 U	-	0.001 U	0.001 U	-	0.001 U	0.001 U	-	0.001 U	0.001 U
Methyl acetate	mg/L	0.01 U	0.01 U	0.01 U	-	0.01 U	0.01 U	-	0.01 U	0.01 U	-	0.01 U	0.01 U
Methyl cyclohexane	mg/L	0.001 U	0.001 U	0.001 U	-	0.001 U	0.001 U	-	0.001 U	0.001 U	-	0.001 U	0.001 U
Methyl tert butyl ether (MTBE)	mg/L	0.001 U	0.005 U	0.005 U	-	0.001 U	0.005 U	-	0.001 U	0.005 U	-	0.001 U	0.005 U
Methylene chloride	mg/L	0.005 U	0.005 U	0.005 U	-	0.005 U	0.005 U	-	0.005 U	0.005 U	-	0.005 U	0.005 U
Styrene	mg/L	0.001 U	0.001 U	0.001 U	-	0.001 U	0.001 U	-	0.001 U	0.001 U	-	0.001 U	0.001 U
Tetrachloroethene	mg/L	0.001 U	0.001 U	0.001 U	-	0.001 U	0.001 U	-	0.001 U	0.001 U	-	0.001 U	0.001 U
Toluene	mg/L	0.001 U	0.001 U	0.001 U	-	0.00048 J	0.001 U	-	0.001 U	0.001 U	-	0.001 U	0.001 U
trans-1,2-Dichloroethene	mg/L	0.001 U	0.001 U	0.001 U	-	0.001 U	0.001 U	-	0.001 U	0.001 U	-	0.001 U	0.001 U
trans-1,3-Dichloropropene	mg/L	0.001 U	0.001 U	0.001 U	-	0.001 U	0.001 U	-	0.001 U	0.001 U	-	0.001 U	0.001 U
Trichloroethene	mg/L	0.001 U	0.001 U	0.001 U	-	0.001 U	0.001 U	-	0.001 U	0.001 U	-	0.001 U	0.001 U
Trichlorofluoromethane (CFC-11)	mg/L	0.001 U	0.001 U	0.001 U	-	0.001 U	0.001 U	-	0.001 U	0.001 U	-	0.001 U	0.001 U
Trifluorotrichloroethane (Freon 113)	mg/L	0.001 U	0.001 U	0.001 U	-	0.001 U	0.001 U	-	0.001 U	0.001 U	-	0.001 U	0.001 U
Vinyl chloride	mg/L	0.001 U	0.001 U	0.001 U	-	0.001 U	0.001 U	-	0.001 U	0.001 U	-	0.001 U	0.001 U
Xylenes (total)	mg/L	0.002 U	0.002 U	0.002 U	-	0.002 U	0.002 U	-	0.002 U	0.002 U	-	0.002 U	0.002 U

TABLE 3.9

PART 201 CRITERIA EXCEEDANCES - GROUNDWATER
2013 RFI REPORT
FORMER GENRERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation		*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*
Aquifier		*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*
Perimeter Status (1)		*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*
Sample Location		*CRA-701M*	*CRA-703M*	*CRA-703M*	*CRA-703M*	*CRA-703M*	*CRA-704M*	*CRA-704M*	*CRA-704M*	*CRA-705M*	*CRA-705M*	*CRA-705M*	*CRA-706M*
Sample Identification (GW-17358-)		*041213-EM-101*	*042012-JY-1067*	*042012-JY-1068*	*080312-CB-006*	*041213-EM-096*	*042512-JY-1096*	*080312-CB-003*	*041013-JY-076*	*012412-DR-031*	*080312-CB-001*	*041613-DR-115*	*012412-DR-030*
Sample Date		*4/12/2013*	*4/20/2012*	*4/20/2012*	*8/3/2012*	*4/12/2013*	*4/25/2012*	*8/3/2012*	*4/10/2013*	*1/24/2012*	*8/3/2012*	*4/16/2013*	*1/24/2012*
Sample Type				*Duplicate*									
Semi-Volatile Organic Compounds (SVOCs)													
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	mg/L	0.0048 U	0.005 U	0.0051 U	-	0.0048 U	0.0048 U	-	0.0048 U	0.005 U	-	0.0048 U	0.0051 U
2,4,5-Trichlorophenol	mg/L	0.0048 U	0.005 U	0.0051 U	-	0.0048 U	0.0048 U	-	0.0048 U	0.005 U	-	0.0048 U	0.0051 U
2,4,6-Trichlorophenol	mg/L	0.0038 U	0.004 U	0.0041 U	-	0.0038 U	0.0038 U	-	0.0038 U	0.004 U	-	0.0038 U	0.0041 U
2,4-Dichlorophenol	mg/L	0.0095 U	0.0099 U	0.01 U	-	0.0095 U	0.0095 U	-	0.0095 U	0.01 U	-	0.0095 U	0.01 U
2,4-Dimethylphenol	mg/L	0.0048 U	0.005 U	0.0051 U	-	0.0048 U	0.0048 U	-	0.0048 U	0.005 U	-	0.0048 U	0.0051 U
2,4-Dinitrophenol	mg/L	0.019 U	0.02 U	0.02 U	-	0.019 U	0.019 U	-	0.019 U	0.02 U	-	0.019 U	0.02 U
2,4-Dinitrotoluene	mg/L	0.0048 U	0.005 U	0.0051 U	-	0.0048 U	0.0048 U	-	0.0048 U	0.005 U	-	0.0048 U	0.0051 U
2,6-Dinitrotoluene	mg/L	0.0048 U	0.005 U	0.0051 U	-	0.0048 U	0.0048 U	-	0.0048 U	0.005 U	-	0.0048 U	0.0051 U
2-Chloronaphthalene	mg/L	0.0048 U	0.005 U	0.0051 U	-	0.0048 U	0.0048 U	-	0.0048 U	0.005 U	-	0.0048 U	0.0051 U
2-Chlorophenol	mg/L	0.0048 U	0.005 U	0.0051 U	-	0.0048 U	0.0048 U	-	0.0048 U	0.005 U	-	0.0048 U	0.0051 U
2-Methylnaphthalene	mg/L	0.0048 U	0.005 U	0.0051 U	-	0.0048 U	0.0048 U	-	0.0048 U	0.005 U	-	0.0048 U	0.0051 U
2-Methylphenol	mg/L	0.0048 U	0.005 U	0.0051 U	-	0.0048 U	0.0048 U	-	0.0048 U	0.005 U	-	0.0048 U	0.0051 U
2-Nitroaniline	mg/L	0.019 U	0.02 U	0.02 U	-	0.019 U	0.019 U	-	0.019 U	0.02 U	-	0.019 U	0.02 U
2-Nitrophenol	mg/L	0.0048 U	0.005 U	0.0051 U	-	0.0048 U	0.0048 U	-	0.0048 U	0.005 U	-	0.0048 U	0.0051 U
3&4-Methylphenol	mg/L	0.0048 U	0.005 U	0.0051 U	-	0.0048 U	0.0048 U	-	0.0048 U	0.005 U	-	0.0048 U	0.0051 U
3,3'-Dichlorobenzidine	mg/L	0.00095 U	0.00099 U	0.001 U	-	0.00095 U	0.00095 U	-	0.00095 U	0.001 U	-	0.00095 U	0.001 U
3-Nitroaniline	mg/L	0.019 U	0.02 U	0.02 U	-	0.019 U	0.019 U	-	0.019 U	0.02 U	-	0.019 U	0.02 U
4,6-Dinitro-2-methylphenol	mg/L	0.019 U	0.02 U	0.02 U	-	0.019 U	0.019 U	-	0.019 U	0.02 U	-	0.019 U	0.02 U
4-Bromophenyl phenyl ether	mg/L	0.0048 U	0.005 U	0.0051 U	-	0.0048 U	0.0048 U	-	0.0048 U	0.005 U	-	0.0048 U	0.0051 U
4-Chloro-3-methylphenol	mg/L	0.0048 U	0.005 U	0.0051 U	-	0.0048 U	0.0048 U	-	0.0048 U	0.005 U	-	0.0048 U	0.0051 U
4-Chloroaniline	mg/L	0.0095 U	0.0099 U	0.01 U	-	0.0095 U	0.0095 U	-	0.0095 U	0.01 U	-	0.0095 U	0.01 U
4-Chlorophenyl phenyl ether	mg/L	0.0048 U	0.005 U	0.0051 U	-	0.0048 U	0.0048 U	-	0.0048 U	0.005 U	-	0.0048 U	0.0051 U
4-Nitroaniline	mg/L	0.019 U	0.02 U	0.02 U	-	0.019 U	0.019 U	-	0.019 U	0.02 U	-	0.019 U	0.02 U
4-Nitrophenol	mg/L	0.019 U	0.02 U	0.02 U	-	0.019 U	0.019 U	-	0.019 U	0.02 U	-	0.019 U	0.02 U
Acenaphthene	mg/L	0.0048 U	0.005 U	0.0051 U	-	0.0048 U	0.0048 U	-	0.0048 U	0.005 U	-	0.0048 U	0.0051 U
Acenaphthylene	mg/L	0.0048 U	0.005 U	0.0051 U	-	0.0048 U	0.0048 U	-	0.0048 U	0.005 U	-	0.0048 U	0.0051 U
Acetophenone	mg/L	0.0048 U	0.005 U	0.0051 U	-	0.0048 U	0.0048 U	-	0.0048 U	0.005 U	-	0.0048 U	0.0051 U
Anthracene	mg/L	0.0048 U	0.005 U	0.0051 U	-	0.0048 U	0.0048 U	-	0.0048 U	0.005 U	-	0.0048 U	0.0051 U
Atrazine	mg/L	0.0029 U	0.003 U	0.0031 U	-	0.0029 U	0.0029 U	-	0.0029 U	0.003 U	-	0.0029 U	0.0031 U
Benzaldehyde	mg/L	0.0048 U	0.005 U	0.0051 U	-	0.0048 U	0.0048 U	-	0.0048 U	0.005 U	-	0.0048 U	0.0051 U
Benzo(a)anthracene	mg/L	0.00095 U	0.00099 U	0.001 U	-	0.00095 U	0.00095 U	-	0.00095 U	0.001 U	-	0.00095 U	0.001 U
Benzo(a)pyrene	mg/L	0.00095 U	0.00099 U	0.001 U	-	0.00095 U	0.00095 U	-	0.00095 U	0.001 U	-	0.00095 U	0.001 U
Benzo(b)fluoranthene	mg/L	0.00095 U	0.00099 U	0.001 U	-	0.00095 U	0.00095 U	-	0.00095 U	0.001 U	-	0.00095 U	0.001 U
Benzo(g,h,i)perylene	mg/L	0.00095 U	0.00099 U	0.001 U	-	0.00095 U	0.00095 U	-	0.00095 U	0.001 U	-	0.00095 U	0.001 U
Benzo(k)fluoranthene	mg/L	0.00095 U	0.00099 U	0.001 U	-	0.00095 U	0.00095 U	-	0.00095 U	0.001 U	-	0.00095 U	0.001 U
Biphenyl (1,1-Biphenyl)	mg/L	0.0048 U	0.005 U	0.0051 U	-	0.0048 U	0.0048 U	-	0.0048 U	0.005 U	-	0.0048 U	0.0051 U
bis(2-Chloroethoxy)methane	mg/L	0.0048 U	0.005 U	0.0051 U	-	0.0048 U	0.0048 U	-	0.0048 U	0.005 U	-	0.0048 U	0.0051 U
bis(2-Chloroethyl)ether	mg/L	0.00095 U	0.00099 U	0.001 U	-	0.00095 U	0.00095 U	-	0.00095 U	0.001 U	-	0.00095 U	0.001 U
bis(2-Ethylhexyl)phthalate (DEHP)	mg/L	0.0016 J	0.005 U	0.0051 U	-	0.0048 U	0.0048 U	-	0.0048 U	0.005 U	-	0.0048 U	0.0051 U
Butyl benzylphthalate (BBP)	mg/L	0.0048 U	0.005 U	0.0051 U	-	0.0048 U	0.0048 U	-	0.0048 U	0.005 U	-	0.0048 U	0.0051 U
Caprolactam	mg/L	0.0095 U	0.0099 U	0.01 U	-	0.0095 U	0.0095 U	-	0.0095 U	0.01 U	-	0.0095 U	0.01 U
Carbazole	mg/L	0.0095 U	0.0099 U	0.01 U	-	0.0095 U	0.0095 U	-	0.0095 U	0.01 U	-	0.0095 U	0.01 U
Chrysene	mg/L	0.00095 U	0.00099 U	0.001 U	-	0.00095 U	0.00095 U	-	0.00095 U	0.001 U	-	0.00095 U	0.001 U
Dibenz(a,h)anthracene	mg/L	0.0019 U	0.002 U	0.002 U	-	0.0019 U	0.0019 U	-	0.0019 U	0.002 U	-	0.0019 U	0.002 U
Dibenzofuran	mg/L	0.0038 U	0.004 U	0.0041 U	-	0.0038 U	0.0038 U	-	0.0038 U	0.004 U	-	0.0038 U	0.0041 U
Diethyl phthalate	mg/L	0.0048 U	0.005 U	0.0051 U	-	0.0048 U	0.0048 U	-	0.0048 U	0.005 U	-	0.0048 U	0.0051 U
Dimethyl phthalate	mg/L	0.0048 U	0.005 U	0.0051 U	-	0.0048 U	0.0048 U	-	0.0048 U	0.005 U	-	0.0048 U	0.0051 U
Di-n-butylphthalate (DBP)	mg/L	0.0048 U	0.005 U	0.0051 U	-	0.0048 U	0.0048 U	-	0.0048 U	0.005 U	-	0.0048 U	0.0051 U
Di-n-octyl phthalate (DnOP)	mg/L	0.0048 U	0.005 U	0.0051 U	-	0.0048 U	0.0048 U	-	0.0048 U	0.005 U	-	0.0048 U	0.0051 U
Fluoranthene	mg/L	0.00095 U	0.00099 U	0.001 U	-	0.00095 U	0.00095 U	-	0.00095 U	0.001 U	-	0.00095 U	0.001 U
Fluorene	mg/L	0.0048 U	0.005 U	0.0051 U	-	0.0048 U	0.0048 U	-	0.0048 U	0.005 U	-	0.0048 U	0.0051 U
Hexachlorobenzene	mg/L	0.00019 U	0.0002 U	0.0002 U	-	0.00019 U	0.00019 U	-	0.00019 U	0.0002 U	-	0.00019 U	0.0002 U

TABLE 3.9

PART 201 CRITERIA EXCEEDANCES - GROUNDWATER
2013 RFI REPORT
FORMER GENRERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation		*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*
Aquifier		*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*
Perimeter Status (1)		*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*
Sample Location		*CRA-701M*	*CRA-703M*	*CRA-703M*	*CRA-703M*	*CRA-703M*	*CRA-704M*	*CRA-704M*	*CRA-704M*	*CRA-705M*	*CRA-705M*	*CRA-705M*	*CRA-706M*
Sample Identification (GW-17358-)		*041213-EM-101*	*042012-JY-1067*	*042012-JY-1068*	*080312-CB-006*	*041213-EM-096*	*042512-JY-1096*	*080312-CB-003*	*041013-JY-076*	*012412-DR-031*	*080312-CB-001*	*041613-DR-115*	*012412-DR-030*
Sample Date		*4/12/2013*	*4/20/2012*	*4/20/2012*	*8/3/2012*	*4/12/2013*	*4/25/2012*	*8/3/2012*	*4/10/2013*	*1/24/2012*	*8/3/2012*	*4/16/2013*	*1/24/2012*
Sample Type				*Duplicate*									
SVOCs Continued													
Hexachlorobutadiene	mg/L	0.00095 U	0.00099 U	0.001 U	-	0.00095 U	0.00095 U	-	0.00095 U	0.001 U	-	0.00095 U	0.001 U
Hexachlorocyclopentadiene	mg/L	0.0048 U	0.005 U	0.0051 U	-	0.0048 U	0.0048 U	-	0.0048 U	0.005 U	-	R	0.0051 U
Hexachloroethane	mg/L	0.0048 U	0.005 U	0.0051 U	-	0.0048 U	0.0048 U	-	0.0048 U	0.005 U	-	0.0048 U	0.0051 U
Indeno(1,2,3-cd)pyrene	mg/L	0.0019 U	0.002 U	0.002 U	-	0.0019 U	0.0019 U	-	0.0019 U	0.002 UJ	-	0.0019 U	0.002 U
Isophorone	mg/L	0.0048 U	0.005 U	0.0051 U	-	0.0048 U	0.0048 U	-	0.0048 U	0.005 U	-	0.0048 U	0.0051 U
Naphthalene	mg/L	0.0048 U	0.005 U	0.0051 U	-	0.0048 U	0.0048 U	-	0.0048 U	0.005 U	-	0.0048 U	0.0051 U
Nitrobenzene	mg/L	0.0029 U	0.003 U	0.0031 U	-	0.0029 U	0.0029 U	-	0.0029 U	0.003 U	-	0.0029 U	0.0031 U
N-Nitrosodi-n-propylamine	mg/L	0.0048 U	0.005 U	0.0051 U	-	0.0048 U	0.0048 U	-	0.0048 U	0.005 U	-	0.0048 U	0.0051 U
N-Nitrosodiphenylamine	mg/L	0.0048 U	0.005 U	0.0051 U	-	0.0048 U	0.0048 U	-	0.0048 U	0.005 U	-	0.0048 U	0.0051 U
Pentachlorophenol	mg/L	0.0048 U	0.005 U	0.0051 U	-	0.0048 U	0.0048 U	-	0.0048 U	0.005 U	-	0.0048 U	0.0051 U
Phenanthrene	mg/L	0.0019 U	0.002 U	0.002 U	-	0.0019 U	0.0019 U	-	0.0019 U	0.002 U	-	0.0019 U	0.002 U
Phenol	mg/L	0.0048 U	0.005 U	0.0051 U	-	0.0048 U	0.0048 U	-	0.0048 U	0.005 U	-	0.0048 U	0.0051 U
Pyrene	mg/L	0.0048 U	0.005 U	0.0051 U	-	0.0048 U	0.0048 U	-	0.0048 U	0.005 U	-	0.0048 U	0.0051 U
Metals													
Aluminum	mg/L	0.05 U	0.049 J	**0.058[ab]**	**0.061[ab]**	0.05 U	0.05 U	0.05 U	0.05 U	**0.42[ab]**	**0.067[ab]**	0.027 J	**0.44[ab]**
Aluminum (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Antimony	mg/L	0.002 U	0.00038 J	0.00042 J	0.00029 J	0.002 U	0.00064 J	0.002 U	0.002 U	0.00056 J	0.00027 J	0.002 U	0.0004 J
Antimony (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Arsenic	mg/L	0.005 U	0.0015 J	0.0015 J	0.0029 J	0.00076 J	0.00081 J	0.0039 J	0.0025 J	0.0011 J	0.0022 J	0.00048 J	0.0011 J
Arsenic (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Barium	mg/L	0.094 J	0.13	0.13	0.14	0.11	0.17	0.39	0.35	0.047 J	0.082 J	0.043 J	0.066 J
Barium (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Beryllium	mg/L	0.001 U	0.001 U	0.001 U	0.00029 J	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Beryllium (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Cadmium	mg/L	0.001 U	0.001 U	0.001 U	0.00046 J	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Cadmium (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Calcium	mg/L	-	95	97	-	-	-	-	-	85	-	-	92
Chromium	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Chromium (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Chromium III (trivalent)	mg/L	-	-	-	-	-	-	-	-	0.01 U	-	-	-
Chromium VI (hexavalent)	mg/L	-	-	-	-	-	-	-	-	0.01 UJ	-	-	-
Cobalt	mg/L	0.000055 J	0.0014 J	0.0014 J	0.0014 J	0.00024 J	0.02 U	0.0012 J	0.0007 J	0.00057 J	0.02 U	0.00022 J	0.00061 J
Cobalt (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Copper	mg/L	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U
Copper (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Iron	mg/L	0.2 U	0.034 J	0.047 J	**0.36[ab]**	0.2 U	0.2 U	**0.39[ab]**	**0.82[ab]**	**0.45[ab]**	0.23	0.2 U	**0.6[ab]**
Iron (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Lead	mg/L	0.003 U	0.003 U	0.003 U	0.0014 J	0.003 U	0.003 U	0.003 U	0.003 U	0.00032 J	0.003 U	0.003 U	0.00043 J
Lead (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Magnesium	mg/L	-	18	18	-	-	-	-	-	16	-	-	18
Manganese	mg/L	0.05 U	**0.49[ab]**	**0.5[ab]**	**0.3[ab]**	**0.11[ab]**	**0.11[ab]**	**0.42[ab]**	**0.27[ab]**	**0.059[ab]**	**0.1[ab]**	**0.061[ab]**	**0.11[ab]**
Manganese (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Mercury	mg/L	0.0002 U	0.04 U	0.04 U	0.0002 U	0.0002 U	0.04 U	0.0002 U	0.0002 U	0.04 U	0.0002 U	0.0002 U	0.04 U
Mercury (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Nickel	mg/L	0.02 U	0.0029 J	0.0029 J	0.0023 J	0.02 U	0.0018 J	0.0017 J	0.0018 J	0.0026 J	0.0014 J	0.0014 J	0.0024 J
Nickel (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Potassium	mg/L	-	2.2 J	2.3 J	-	-	-	-	-	1.2 J	-	-	1.4 J
Selenium	mg/L	0.001 J	0.00094 J	0.00083 J	0.0017 J	0.0015 J	0.003 J	0.005 U	0.005 U	0.0011 J	0.00077 J	0.00039 J	0.005 U
Selenium (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Silver	mg/L	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.000018 J	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Silver (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Sodium	mg/L	-	**190[a]**	**200[a]**	-	-	-	-	-	34	-	-	40

TABLE 3.9

PART 201 CRITERIA EXCEEDANCES - GROUNDWATER
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FORMER GENRERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation		*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*
Aquifier		*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*
Perimeter Status (1)		*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*
Sample Location		*CRA-701M*	*CRA-703M*	*CRA-703M*	*CRA-703M*	*CRA-703M*	*CRA-704M*	*CRA-704M*	*CRA-704M*	*CRA-705M*	*CRA-705M*	*CRA-705M*	*CRA-706M*
Sample Identification (GW-17358-)		*041213-EM-101*	*042012-JY-1067*	*042012-JY-1068*	*080312-CB-006*	*041213-EM-096*	*042512-JY-1096*	*080312-CB-003*	*041013-JY-076*	*012412-DR-031*	*080312-CB-001*	*041613-DR-115*	*012412-DR-030*
Sample Date		*4/12/2013*	*4/20/2012*	*4/20/2012*	*8/3/2012*	*4/12/2013*	*4/25/2012*	*8/3/2012*	*4/10/2013*	*1/24/2012*	*8/3/2012*	*4/16/2013*	*1/24/2012*
Sample Type				*Duplicate*									
Metals Continued													
Thallium	mg/L	0.002 U	0.002 U	0.002 U	0.00023 J	0.002 U	0.00021 J	0.002 U	0.002 U	0.00054 J	0.00025 J	0.002 U	0.002 U
Thallium (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Vanadium	mg/L	0.004 U	0.004 U	0.004 U	0.00062 J	0.004 U	0.004 U	0.004 U	0.004 U	0.0013 J	0.004 U	0.004 U	0.0014 J
Vanadium (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Zinc	mg/L	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Zinc (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Polychlorinated Biphenyls (PCBs)													
Aroclor-1016 (PCB-1016)	mg/L	0.000095 U	0.000097 U	0.0001 U	-	0.000095 U	0.0001 U	-	0.000095 U	0.0001 U	-	0.000095 U	0.0001 U
Aroclor-1221 (PCB-1221)	mg/L	0.000095 U	0.000097 U	0.0001 U	-	0.000095 U	0.0001 U	-	0.000095 U	0.0001 U	-	0.000095 U	0.0001 U
Aroclor-1232 (PCB-1232)	mg/L	0.000095 U	0.000097 U	0.0001 U	-	0.000095 U	0.0001 U	-	0.000095 U	0.0001 U	-	0.000095 U	0.0001 U
Aroclor-1242 (PCB-1242)	mg/L	0.000095 U	0.000097 U	0.0001 U	-	0.000095 U	0.0001 U	-	0.000095 U	0.0001 U	-	0.000095 U	0.0001 U
Aroclor-1248 (PCB-1248)	mg/L	0.000095 U	0.000097 U	0.0001 U	-	0.000095 U	0.0001 U	-	0.000095 U	0.0001 U	-	0.000095 U	0.0001 U
Aroclor-1254 (PCB-1254)	mg/L	0.000095 U	0.000097 U	0.0001 U	-	0.000095 U	0.0001 U	-	0.000095 U	0.0001 U	-	0.000095 U	0.0001 U
Aroclor-1260 (PCB-1260)	mg/L	0.000095 U	0.000097 U	0.0001 U	-	0.000095 U	0.0001 U	-	0.000095 U	0.0001 U	-	0.000095 U	0.0001 U
Aroclor-1262 (PCB-1262)	mg/L	0.000095 U	0.000097 U	0.0001 U	-	0.000095 U	0.0001 U	-	0.000095 U	-	-	0.000095 U	-
Aroclor-1268 (PCB-1268)	mg/L	0.000095 U	0.000097 U	0.0001 U	-	0.000095 U	0.0001 U	-	0.000095 U	-	-	0.000095 U	-
Total PCBs	mg/L	ND	ND	ND	-	ND	ND	-	ND	ND	-	ND	ND
General Chemistry													
Cyanide (amenable)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Phosphorus	mg/L	-	-	-	-	0.1 U	-	-	0.1 U	-	-	-	-
Field Parameters													
Turbidity, field	NTU	2.54	4.4	4.4	4.27	1.06	1.19	4.7	1.3	14.6	3.29	2.28	16

Notes
Michigan Part 201 generic clean up criteria (updated September 28, 2012)
ID - Insufficient data to develop criterion
NLV - Hazardous substance is not likely to volatilize under most conditions
NA - Criterion or value is not available

Perimeter Status (1) - N - non-perimeter, Y - perimeter
mg/L - miligram per liter
NTU - Nephelometric Turbidity Unit

Notes:
U - Not detected at the associated reporting limit.
J - Estimated concentration.
UJ - Not detected; associated reporting limit is estimated.

TABLE 3.9

PART 201 CRITERIA EXCEEDANCES - GROUNDWATER
2013 RFI REPORT
FORMER GENRERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation		*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*WEST01*
Aquifier		*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Intermediate*
Perimeter Status (1)		*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*N*
Sample Location		*CRA-706M*	*CRA-706M*	*CRA-709M*	*CRA-709M*	*CRA-710M*	*CRA-710M*	*CRA-710M*	*CRA-710M*	*CRA-833M*	*CRA-833M*	*CRA-834M*	*CRA-834M*	*CRA-720I*
Sample Identification (GW-17358-)		*080312-CB-002*	*041613-DR-114*	*012312-DR-026*	*041613-DR-112*	*012312-DR-025*	*020712-SK-038*	*041212-DR-1000*	*041613-DR-111*	*012412-DR-032*	*041713-DR-118*	*012412-DR-033*	*041713-DR-117*	*042412-DR-1092*
Sample Date		*8/3/2012*	*4/16/2013*	*1/23/2012*	*4/16/2013*	*1/23/2012*	*2/7/2012*	*4/12/2012*	*4/16/2013*	*1/24/2012*	*4/17/2013*	*1/24/2012*	*4/17/2013*	*4/24/2012*
Sample Type														
Volatile Organic Compounds (VOCs)	***Units***													
1,1,1-Trichloroethane	mg/L	-	0.001 U	0.001 U	0.001 U	0.001 U	-	-	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,1,2,2-Tetrachloroethane	mg/L	-	0.001 U	0.001 U	0.001 U	0.001 U	-	-	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,1,2-Trichloroethane	mg/L	-	0.001 U	0.001 U	0.001 U	0.001 U	-	-	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,1-Dichloroethane	mg/L	-	0.001 U	0.001 U	0.001 U	0.001 U	-	-	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,1-Dichloroethene	mg/L	-	0.001 U	0.001 U	0.001 U	0.001 U	-	-	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,2,4-Trichlorobenzene	mg/L	-	0.001 U	0.001 U	0.001 U	0.001 U	-	-	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,2-Dibromo-3-chloropropane (DBCP)	mg/L	-	0.001 U	0.001 U	0.001 U	0.001 U	-	-	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,2-Dibromoethane (Ethylene dibromide)	mg/L	-	0.001 U	0.001 U	0.001 U	0.001 U	-	-	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,2-Dichlorobenzene	mg/L	-	0.001 U	0.001 U	0.001 U	0.001 U	-	-	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,2-Dichloroethane	mg/L	-	0.001 U	0.001 U	0.001 U	0.001 U	-	-	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,2-Dichloropropane	mg/L	-	0.001 U	0.001 U	0.001 U	0.001 U	-	-	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,3-Dichlorobenzene	mg/L	-	0.001 U	0.001 U	0.001 U	0.001 U	-	-	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,4-Dichlorobenzene	mg/L	-	0.001 U	0.001 U	0.001 U	0.001 U	-	-	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
2-Butanone (Methyl ethyl ketone) (MEK)	mg/L	-	0.01 U	0.01 U	0.01 U	0.00057 J	-	-	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
2-Hexanone	mg/L	-	0.01 U	0.01 U	0.01 U	0.01 U	-	-	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	mg/L	-	0.01 U	0.01 U	0.01 U	0.01 U	-	-	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Acetone	mg/L	-	0.01 U	0.01 U	0.01 U	0.01 U	-	-	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Benzene	mg/L	-	0.001 U	0.001 U	0.001 U	0.001 U	-	-	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Bromodichloromethane	mg/L	-	0.001 U	0.001 U	0.001 U	0.001 U	-	-	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Bromoform	mg/L	-	0.001 U	0.001 U	0.001 U	0.001 U	-	-	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Bromomethane (Methyl bromide)	mg/L	-	0.001 U	0.001 U	0.001 U	0.001 U	-	-	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Carbon disulfide	mg/L	-	0.005 U	0.005 U	0.005 U	0.005 U	-	-	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Carbon tetrachloride	mg/L	-	0.001 U	0.001 U	0.001 U	0.001 U	-	-	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Chlorobenzene	mg/L	-	0.001 U	0.001 U	0.001 U	0.001 U	-	-	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Chloroethane	mg/L	-	0.001 U	0.001 U	0.001 U	0.001 U	-	-	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Chloroform (Trichloromethane)	mg/L	-	0.001 U	0.001 U	0.001 U	0.001 U	-	-	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.00032 J
Chloromethane (Methyl chloride)	mg/L	-	0.001 U	0.001 U	0.001 U	0.001 U	-	-	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
cis-1,2-Dichloroethene	mg/L	-	0.001 U	0.001 U	0.001 U	0.001 U	-	-	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
cis-1,3-Dichloropropene	mg/L	-	0.001 U	0.001 U	0.001 U	0.001 U	-	-	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Cyclohexane	mg/L	-	0.001 U	0.001 U	0.001 U	0.001 U	-	-	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Dibromochloromethane	mg/L	-	0.001 U	0.001 U	0.001 U	0.001 U	-	-	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Dichlorodifluoromethane (CFC-12)	mg/L	-	0.001 U	0.001 U	0.001 U	0.001 U	-	-	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Ethylbenzene	mg/L	-	0.001 U	0.001 U	0.001 U	0.001 U	-	-	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Isopropyl benzene	mg/L	-	0.001 U	0.001 U	0.001 U	0.001 U	-	-	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Methyl acetate	mg/L	-	0.01 U	0.01 U	0.01 U	0.01 U	-	-	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Methyl cyclohexane	mg/L	-	0.001 U	0.001 U	0.001 U	0.001 U	-	-	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Methyl tert butyl ether (MTBE)	mg/L	-	0.001 U	0.005 U	0.001 U	0.005 U	-	-	0.001 U	0.005 U	0.001 U	0.005 U	0.001 U	0.005 U
Methylene chloride	mg/L	-	0.005 U	0.005 U	0.005 U	0.005 U	-	-	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Styrene	mg/L	-	0.001 U	0.001 U	0.001 U	0.001 U	-	-	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Tetrachloroethene	mg/L	-	0.001 U	0.001 U	0.001 U	0.001 U	-	-	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Toluene	mg/L	-	0.001 U	0.001 U	0.001 U	0.001 U	-	-	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
trans-1,2-Dichloroethene	mg/L	-	0.001 U	0.001 U	0.001 U	0.001 U	-	-	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
trans-1,3-Dichloropropene	mg/L	-	0.001 U	0.001 U	0.001 U	0.001 U	-	-	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Trichloroethene	mg/L	-	0.001 U	0.001 U	0.001 U	0.001 U	-	-	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Trichlorofluoromethane (CFC-11)	mg/L	-	0.001 U	0.001 U	0.001 U	0.001 U	-	-	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Trifluorotrichloroethane (Freon 113)	mg/L	-	0.001 U	0.001 U	0.001 U	0.001 U	-	-	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Vinyl chloride	mg/L	-	0.001 U	0.001 U	0.001 U	0.001 U	-	-	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Xylenes (total)	mg/L	-	0.002 U	0.002 U	0.002 U	0.002 U	-	-	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U

TABLE 3.9

PART 201 CRITERIA EXCEEDANCES - GROUNDWATER
2013 RFI REPORT
FORMER GENRERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation		*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*WEST01*
Aquifier		*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Intermediate*
Perimeter Status (1)		*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*N*
Sample Location		*CRA-706M*	*CRA-706M*	*CRA-709M*	*CRA-709M*	*CRA-710M*	*CRA-710M*	*CRA-710M*	*CRA-710M*	*CRA-833M*	*CRA-833M*	*CRA-834M*	*CRA-834M*	*CRA-720I*
Sample Identification (GW-17358-)		*080312-CB-002*	*041613-DR-114*	*012312-DR-026*	*041613-DR-112*	*012312-DR-025*	*020712-SK-038*	*041212-DR-1000*	*041613-DR-111*	*012412-DR-032*	*041713-DR-118*	*012412-DR-033*	*041713-DR-117*	*042412-DR-1092*
Sample Date		*8/3/2012*	*4/16/2013*	*1/23/2012*	*4/16/2013*	*1/23/2012*	*2/7/2012*	*4/12/2012*	*4/16/2013*	*1/24/2012*	*4/17/2013*	*1/24/2012*	*4/17/2013*	*4/24/2012*
Sample Type														
Semi-Volatile Organic Compounds (SVOCs)														
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	mg/L	-	0.0048 U	0.0052 U	0.0051 U	0.0051 U	-	-	0.0048 U	0.005 U	0.0052 U	0.0048 U	0.0051 U	0.005 U
2,4,5-Trichlorophenol	mg/L	-	0.0048 U	0.0052 U	0.0051 U	0.0051 U	-	-	0.0048 U	0.005 U	0.0052 U	0.0048 U	0.0051 U	0.005 U
2,4,6-Trichlorophenol	mg/L	-	0.0038 U	0.0042 U	0.0041 U	0.0041 U	-	-	0.0038 U	0.004 U	0.0041 U	0.0038 U	0.0041 U	0.004 U
2,4-Dichlorophenol	mg/L	-	0.0095 U	0.01 U	0.01 U	0.01 U	-	-	0.0095 U	0.0099 U	0.01 U	0.0095 U	0.01 U	0.01 U
2,4-Dimethylphenol	mg/L	-	0.0048 U	0.0052 U	0.0051 U	0.0051 U	-	-	0.0048 U	0.005 U	0.0052 U	0.0048 U	0.0051 U	0.005 U
2,4-Dinitrophenol	mg/L	-	0.019 U	0.021 U	0.02 U	0.02 U	-	-	0.019 U	0.02 U	0.021 U	0.019 U	0.02 U	0.02 U
2,4-Dinitrotoluene	mg/L	-	0.0048 U	0.0052 U	0.0051 U	0.0051 U	-	-	0.0048 U	0.005 U	0.0052 U	0.0048 U	0.0051 U	0.005 U
2,6-Dinitrotoluene	mg/L	-	0.0048 U	0.0052 U	0.0051 U	0.0051 U	-	-	0.0048 U	0.005 U	0.0052 U	0.0048 U	0.0051 U	0.005 U
2-Chloronaphthalene	mg/L	-	0.0048 U	0.0052 U	0.0051 U	0.0051 U	-	-	0.0048 U	0.005 U	0.0052 U	0.0048 U	0.0051 U	0.005 U
2-Chlorophenol	mg/L	-	0.0048 U	0.0052 U	0.0051 U	0.0051 U	-	-	0.0048 U	0.005 U	0.0052 U	0.0048 U	0.0051 U	0.005 U
2-Methylnaphthalene	mg/L	-	0.0048 U	0.0052 U	0.0051 U	0.0051 U	-	-	0.0048 U	0.005 U	0.0052 U	0.0048 U	0.0051 U	0.005 U
2-Methylphenol	mg/L	-	0.0048 U	0.0052 U	0.0051 U	0.0051 U	-	-	0.0048 U	0.005 U	0.0052 U	0.0048 U	0.0051 U	0.005 U
2-Nitroaniline	mg/L	-	0.019 U	0.021 U	0.02 U	0.02 U	-	-	0.019 U	0.02 U	0.021 U	0.019 U	0.02 U	0.02 U
2-Nitrophenol	mg/L	-	0.0048 U	0.0052 U	0.0051 U	0.0051 U	-	-	0.0048 U	0.005 U	0.0052 U	0.0048 U	0.0051 U	0.005 U
3&4-Methylphenol	mg/L	-	0.0048 U	0.0052 U	0.0051 U	0.0051 U	-	-	0.0048 U	0.005 U	0.0052 U	0.0048 U	0.0051 U	0.005 U
3,3'-Dichlorobenzidine	mg/L	-	0.00095 U	0.001 U	0.001 U	0.001 U	-	-	0.00095 U	0.00099 U	0.001 U	0.00095 U	0.001 U	0.001 U
3-Nitroaniline	mg/L	-	0.019 U	0.021 U	0.02 U	0.02 U	-	-	0.019 U	0.02 U	0.021 U	0.019 U	0.02 U	0.02 U
4,6-Dinitro-2-methylphenol	mg/L	-	0.019 U	0.021 U	0.02 U	0.02 U	-	-	0.019 U	0.02 U	0.021 U	0.019 U	0.02 U	0.02 U
4-Bromophenyl phenyl ether	mg/L	-	0.0048 U	0.0052 U	0.0051 U	0.0051 U	-	-	0.0048 U	0.005 U	0.0052 U	0.0048 U	0.0051 U	0.005 U
4-Chloro-3-methylphenol	mg/L	-	0.0048 U	0.0052 U	0.0051 U	0.0051 U	-	-	0.0048 U	0.005 U	0.0052 U	0.0048 U	0.0051 U	0.005 U
4-Chloroaniline	mg/L	-	0.0095 U	0.01 U	0.01 U	0.01 U	-	-	0.0095 U	0.0099 U	0.01 U	0.0095 U	0.01 U	0.01 U
4-Chlorophenyl phenyl ether	mg/L	-	0.0048 U	0.0052 U	0.0051 U	0.0051 U	-	-	0.0048 U	0.005 U	0.0052 U	0.0048 U	0.0051 U	0.005 U
4-Nitroaniline	mg/L	-	0.019 U	0.021 U	0.02 U	0.02 U	-	-	0.019 U	0.02 U	0.021 U	0.019 U	0.02 U	0.02 U
4-Nitrophenol	mg/L	-	0.019 U	0.021 U	0.02 U	0.02 U	-	-	0.019 U	0.02 U	0.021 U	0.019 U	0.02 U	0.02 U
Acenaphthene	mg/L	-	0.0048 U	0.0052 U	0.0051 U	0.0051 U	-	-	0.0048 U	0.005 U	0.0052 U	0.0048 U	0.0051 U	0.005 U
Acenaphthylene	mg/L	-	0.0048 U	0.0052 U	0.0051 U	0.0051 U	-	-	0.0048 U	0.005 U	0.0052 U	0.0048 U	0.0051 U	0.005 U
Acetophenone	mg/L	-	0.0048 U	0.0052 U	0.0051 U	0.0051 U	-	-	0.0048 U	0.005 U	0.0052 U	0.0048 U	0.0051 U	0.005 U
Anthracene	mg/L	-	0.0048 U	0.0052 U	0.0051 U	0.0051 U	-	-	0.0048 U	0.005 U	0.0052 U	0.0048 U	0.0051 U	0.005 U
Atrazine	mg/L	-	0.0029 U	0.0031 U	0.0031 U	0.0031 U	-	-	0.0029 U	0.003 U	0.0031 U	0.0029 U	0.0031 U	0.003 U
Benzaldehyde	mg/L	-	0.0048 U	0.0052 U	0.0051 U	0.0051 U	-	-	0.0048 U	0.005 U	0.0052 U	0.0048 U	0.0051 U	0.005 U
Benzo(a)anthracene	mg/L	-	0.00095 U	0.001 U	0.001 U	0.001 U	-	-	0.00095 U	0.00099 U	0.001 U	0.00095 U	0.001 U	0.001 U
Benzo(a)pyrene	mg/L	-	0.00095 U	0.001 U	0.001 U	0.001 U	-	-	0.00095 U	0.00099 U	0.001 U	0.00095 U	0.001 U	0.001 U
Benzo(b)fluoranthene	mg/L	-	0.00095 U	0.001 U	0.001 U	0.001 U	-	-	0.00095 U	0.00099 U	0.001 U	0.00095 U	0.001 U	0.001 U
Benzo(g,h,i)perylene	mg/L	-	0.00095 U	0.001 U	0.001 U	0.001 U	-	-	0.00095 U	0.00099 U	0.001 U	0.00095 U	0.001 U	0.001 U
Benzo(k)fluoranthene	mg/L	-	0.00095 U	0.001 U	0.001 U	0.001 U	-	-	0.00095 U	0.00099 U	0.001 U	0.00095 U	0.001 U	0.001 U
Biphenyl (1,1-Biphenyl)	mg/L	-	0.0048 U	0.0052 U	0.0051 U	0.0051 U	-	-	0.0048 U	0.005 U	0.0052 U	0.0048 U	0.0051 U	0.005 U
bis(2-Chloroethoxy)methane	mg/L	-	0.0048 U	0.0052 U	0.0051 U	0.0051 U	-	-	0.0048 U	0.005 U	0.0052 U	0.0048 U	0.0051 U	0.005 U
bis(2-Chloroethyl)ether	mg/L	-	0.00095 U	0.001 U	0.001 U	0.001 U	-	-	0.00095 U	0.00099 U	0.001 U	0.00095 U	0.001 U	0.001 U
bis(2-Ethylhexyl)phthalate (DEHP)	mg/L	-	0.0048 U	0.0052 U	0.0051 U	0.0051 U	-	-	0.0048 U	0.005 U	0.0052 U	0.0048 U	0.0051 U	0.00096 J
Butyl benzylphthalate (BBP)	mg/L	-	0.0048 U	0.0052 U	0.0051 U	0.0051 U	-	-	0.0048 U	0.005 U	0.0052 U	0.0048 U	0.0051 U	0.005 U
Caprolactam	mg/L	-	0.0095 U	0.01 U	0.01 U	0.01 U	-	-	0.0095 U	0.0099 U	0.01 U	0.0095 U	0.01 U	0.01 U
Carbazole	mg/L	-	0.0095 U	0.01 U	0.01 U	0.01 U	-	-	0.0095 U	0.0099 U	0.01 U	0.0095 U	0.01 U	0.01 U
Chrysene	mg/L	-	0.00095 U	0.001 U	0.001 U	0.001 U	-	-	0.00095 U	0.00099 U	0.001 U	0.00095 U	0.001 U	0.001 U
Dibenz(a,h)anthracene	mg/L	-	0.0019 U	0.0021 U	0.002 U	0.002 U	-	-	0.0019 U	0.002 U	0.0021 U	0.0019 U	0.002 U	0.002 U
Dibenzofuran	mg/L	-	0.0038 U	0.0042 U	0.0041 U	0.0041 U	-	-	0.0038 U	0.004 U	0.0041 U	0.0038 U	0.0041 U	0.004 U
Diethyl phthalate	mg/L	-	0.0048 U	0.0052 U	0.0051 U	0.0051 U	-	-	0.0048 U	0.005 U	0.0052 U	0.0048 U	0.0051 U	0.005 U
Dimethyl phthalate	mg/L	-	0.0048 U	0.0052 U	0.0051 U	0.0051 U	-	-	0.0048 U	0.005 U	0.0052 U	0.0048 U	0.0051 U	0.005 U
Di-n-butylphthalate (DBP)	mg/L	-	0.0048 U	0.0052 U	0.0051 U	0.0051 U	-	-	0.0048 U	0.005 U	0.0052 U	0.0048 U	0.0051 U	0.005 U
Di-n-octyl phthalate (DnOP)	mg/L	-	0.0048 U	0.0052 U	0.0051 U	0.0051 U	-	-	0.0048 U	0.005 U	0.0052 U	0.0048 U	0.0051 U	0.005 U
Fluoranthene	mg/L	-	0.00095 U	0.001 U	0.001 U	0.001 U	-	-	0.00095 U	0.00099 U	0.001 U	0.00095 U	0.001 U	0.001 U
Fluorene	mg/L	-	0.0048 U	0.0052 U	0.0051 U	0.0051 U	-	-	0.0048 U	0.005 U	0.0052 U	0.0048 U	0.0051 U	0.005 U
Hexachlorobenzene	mg/L	-	0.00019 U	0.00021 U	0.0002 U	0.0002 U	-	-	0.00019 U	0.0002 U	0.00021 U	0.00019 U	0.0002 U	0.0002 U

TABLE 3.9

PART 201 CRITERIA EXCEEDANCES - GROUNDWATER
2013 RFI REPORT
FORMER GENRERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation		*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*WEST01*
Aquifer		*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Intermediate*
Perimeter Status (1)		*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*N*
Sample Location		*CRA-706M*	*CRA-706M*	*CRA-709M*	*CRA-709M*	*CRA-710M*	*CRA-710M*	*CRA-710M*	*CRA-710M*	*CRA-833M*	*CRA-833M*	*CRA-834M*	*CRA-834M*	*CRA-720I*
Sample Identification (GW-17358-)		*080312-CB-002*	*041613-DR-114*	*012312-DR-026*	*041613-DR-112*	*012312-DR-025*	*020712-SK-038*	*041212-DR-1000*	*041613-DR-111*	*012412-DR-032*	*041713-DR-118*	*012412-DR-033*	*041713-DR-117*	*042412-DR-1092*
Sample Date		*8/3/2012*	*4/16/2013*	*1/23/2012*	*4/16/2013*	*1/23/2012*	*2/7/2012*	*4/12/2012*	*4/16/2013*	*1/24/2012*	*4/17/2013*	*1/24/2012*	*4/17/2013*	*4/24/2012*
Sample Type														
SVOCs Continued														
Hexachlorobutadiene	mg/L	-	0.00095 U	0.001 U	0.001 U	0.001 U	-	-	0.00095 U	0.00099 U	0.001 U	0.00095 U	0.001 U	0.001 U
Hexachlorocyclopentadiene	mg/L	-	R	0.0052 U	R	0.0051 U	-	-	R	0.005 U	R	0.0048 U	R	0.005 U
Hexachloroethane	mg/L	-	0.0048 U	0.0052 U	0.0051 U	0.0051 U	-	-	0.0048 U	0.005 U	0.0052 U	0.0048 U	0.0051 U	0.005 U
Indeno(1,2,3-cd)pyrene	mg/L	-	0.0019 U	0.0021 U	0.002 U	0.002 U	-	-	0.0019 U	0.002 U	0.0021 U	0.0019 U	0.002 U	0.002 U
Isophorone	mg/L	-	0.0048 U	0.0052 U	0.0051 U	0.0051 U	-	-	0.0048 U	0.005 U	0.0052 U	0.0048 U	0.0051 U	0.005 U
Naphthalene	mg/L	-	0.0048 U	0.0052 U	0.0051 U	0.0051 U	-	-	0.0048 U	0.005 U	0.0052 U	0.0048 U	0.0051 U	0.005 U
Nitrobenzene	mg/L	-	0.0029 U	0.0031 U	0.0031 U	0.0031 U	-	-	0.0029 U	0.003 U	0.0031 U	0.0029 U	0.0031 U	0.003 U
N-Nitrosodi-n-propylamine	mg/L	-	0.0048 U	0.0052 U	0.0051 U	0.0051 U	-	-	0.0048 U	0.005 U	0.0052 U	0.0048 U	0.0051 U	0.005 U
N-Nitrosodiphenylamine	mg/L	-	0.0048 U	0.0052 U	0.0051 U	0.0051 U	-	-	0.0048 U	0.005 U	0.0052 U	0.0048 U	0.0051 U	0.005 U
Pentachlorophenol	mg/L	-	0.0048 U	0.0052 U	0.0051 U	0.0051 U	-	-	0.0048 U	0.005 U	0.0052 U	0.0048 U	0.0051 U	0.005 U
Phenanthrene	mg/L	-	0.0019 U	0.0021 U	0.002 U	0.002 U	-	-	0.0019 U	0.002 U	0.0021 U	0.0019 U	0.002 U	0.002 U
Phenol	mg/L	-	0.0048 U	0.0052 U	0.0051 U	0.0051 U	-	-	0.0048 U	0.005 U	0.0052 U	0.0048 U	0.0051 U	0.005 U
Pyrene	mg/L	-	0.0048 U	0.0052 U	0.0051 U	0.0051 U	-	-	0.0048 U	0.005 U	0.0052 U	0.0048 U	0.0051 U	0.005 U
Metals														
Aluminum	mg/L	0.05 U	0.0078 J	**0.33**[ab]	**0.14 J**[ab]	**35**[ab]	-	0.031 J	0.024 J	**0.43**[ab]	**0.14**[ab]	**0.1**[ab]	0.019 J	0.035 J
Aluminum (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
Antimony	mg/L	0.00026 J	0.002 U	0.00029 J	0.002 U	0.0022	-	0.00042 J	0.002 U	0.00028 J	0.002 U	0.00084 J	0.002 U	0.00028 J
Antimony (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
Arsenic	mg/L	0.0017 J	0.00086 J	0.0026 J	0.0017 J	**0.017**[abc]	-	0.002 J	0.0012 J	0.0038 J	0.0024 J	0.003 J	0.0011 J	0.0048 J
Arsenic (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
Barium	mg/L	0.066 J	0.067 J	0.14	0.16	0.29	-	0.072 J	0.077 J	0.11	0.097 J	0.062 J	0.084 J	0.47
Barium (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
Beryllium	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.002	-	0.001 U	0.001 U	0.001 U	0.00028 J	0.001 U	0.001 U	0.001 U
Beryllium (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
Cadmium	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.0002 J	-	0.001 U	0.001 U	0.001 U	0.00017 J	0.001 U	0.000053 J	0.001 U
Cadmium (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
Calcium	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
Chromium	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	**0.021**[c]	-	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Chromium (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
Chromium III (trivalent)	mg/L	-	-	0.01 U	-	-	-	-	-	-	-	-	-	0.01 U
Chromium VI (hexavalent)	mg/L	-	-	0.01 U	-	-	-	-	-	-	-	-	-	0.01 U
Cobalt	mg/L	0.02 U	0.00029 J	0.0019 J	0.0012 J	0.0071 J	-	0.00059 J	0.0003 J	0.00047 J	0.00032 J	0.00055 J	0.00026 J	0.001 J
Cobalt (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
Copper	mg/L	0.004 U	0.004 U	0.004 U	0.004 U	**0.033**[c]	-	0.00042 J	0.004 U	0.004 U	0.0017 J	0.004 U	0.004 U	0.004 U
Copper (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
Iron	mg/L	0.15 J	0.18 J	**0.84**[ab]	**0.96**[ab]	**24**[ab]	-	0.2 U	0.24	**0.76**[ab]	**0.99**[ab]	0.15 J	0.21	**0.43**[b]
Iron (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
Lead	mg/L	0.003 U	0.003 U	0.00036 J	0.00034 J	**0.027**[ab]	-	0.003 U	0.0002 J	0.00035 J	0.00045 J	0.00033 J	0.00026 J	0.0011 J
Lead (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
Magnesium	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
Manganese	mg/L	**0.11**[ab]	**0.11**[ab]	**0.28**[ab]	**0.28**[ab]	**0.25**[ab]	-	0.18 U	**0.11**[ab]	**0.19**[ab]	**0.21**[ab]	**0.051**[ab]	0.016 J	**0.28**[b]
Manganese (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
Mercury	mg/L	0.0002 U	0.0002 U	0.04 U	0.0002 U	0.04 U	-	0.04 U	0.0002 U	0.04 U	0.0002 U	0.04 U	0.0002 U	0.04 U
Mercury (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
Nickel	mg/L	0.0012 J	0.0014 J	0.0026 J	0.0021 J	0.02	-	0.002 J	0.0013 J	0.0014 J	0.0013 J	0.0029 J	0.0028 J	0.0021 J
Nickel (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
Potassium	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
Selenium	mg/L	0.005 U	0.00061 J	0.005 U	0.005 U	0.0046 J	-	0.005 U	0.00099 J	0.005 U	0.00027 J	0.005 U	0.00072 J	0.005 U
Selenium (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
Silver	mg/L	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	-	0.0002 U	0.0002 U	0.0002 U	0.000013 J	0.0002 U	0.0002 U	0.0002 U
Silver (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
Sodium	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-

TABLE 3.9

PART 201 CRITERIA EXCEEDANCES - GROUNDWATER
2013 RFI REPORT
FORMER GENRERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation		*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*WEST01*
Aquifier		*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Intermediate*
Perimeter Status (1)		*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*N*
Sample Location		*CRA-706M*	*CRA-706M*	*CRA-709M*	*CRA-709M*	*CRA-710M*	*CRA-710M*	*CRA-710M*	*CRA-710M*	*CRA-833M*	*CRA-833M*	*CRA-834M*	*CRA-834M*	*CRA-720I*
Sample Identification (GW-17358-)		*080312-CB-002*	*041613-DR-114*	*012312-DR-026*	*041613-DR-112*	*012312-DR-025*	*020712-SK-038*	*041212-DR-1000*	*041613-DR-111*	*012412-DR-032*	*041713-DR-118*	*012412-DR-033*	*041713-DR-117*	*042412-DR-1092*
Sample Date		*8/3/2012*	*4/16/2013*	*1/23/2012*	*4/16/2013*	*1/23/2012*	*2/7/2012*	*4/12/2012*	*4/16/2013*	*1/24/2012*	*4/17/2013*	*1/24/2012*	*4/17/2013*	*4/24/2012*
Sample Type														
Metals Continued														
Thallium	mg/L	0.002 U	0.002 U	0.00018 J	0.002 U	0.00061 J	-	0.00069 J	0.002 U	0.00017 J	0.0012 J	0.002 U	0.002 U	0.00015 J
Thallium (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
Vanadium	mg/L	0.004 U	0.00015 J	0.001 J	0.0005 J	**0.047**[ac]	-	0.004 U	0.004 U	0.0012 J	0.0006 J	0.0015 J	0.00039 J	0.004 U
Vanadium (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
Zinc	mg/L	0.05 U	0.05 U	0.05 U	0.05 U	0.081	-	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Zinc (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
Polychlorinated Biphenyls (PCBs)														
Aroclor-1016 (PCB-1016)	mg/L	-	0.000095 U	0.000095 U	0.0001 U	-	0.000095 U	-	0.000095 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U
Aroclor-1221 (PCB-1221)	mg/L	-	0.000095 U	0.000095 U	0.0001 U	-	0.000095 U	-	0.000095 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U
Aroclor-1232 (PCB-1232)	mg/L	-	0.000095 U	0.000095 U	0.0001 U	-	0.000095 U	-	0.000095 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U
Aroclor-1242 (PCB-1242)	mg/L	-	0.000095 U	0.000095 U	0.0001 U	-	0.000095 U	-	0.000095 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U
Aroclor-1248 (PCB-1248)	mg/L	-	0.000095 U	0.000095 U	0.0001 U	-	0.000095 U	-	0.000095 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U
Aroclor-1254 (PCB-1254)	mg/L	-	0.000095 U	0.000095 U	0.0001 U	-	0.000095 U	-	0.000095 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U
Aroclor-1260 (PCB-1260)	mg/L	-	0.000095 U	0.000095 U	0.0001 U	-	0.000095 U	-	0.000095 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U
Aroclor-1262 (PCB-1262)	mg/L	-	0.000095 U	-	0.0001 U	-	-	-	0.000095 U	-	0.0001 U	-	0.0001 U	-
Aroclor-1268 (PCB-1268)	mg/L	-	0.000095 U	-	0.0001 U	-	-	-	0.000095 U	-	0.0001 U	-	0.0001 U	-
Total PCBs	mg/L	-	ND	ND	ND	-	ND	-	ND	ND	ND	ND	ND	ND
General Chemistry														
Cyanide (amenable)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
Phosphorus	mg/L	-	0.1 U	-	-	-	-	-	0.1 U	-	-	-	-	-
Field Parameters														
Turbidity, field	NTU	2.23	1.71	15.7	2.14	667	6.88	0.95	1.29	19	13.8	3.93	3.81	2.69

Notes
Michigan Part 201 generic clean up criteria (updated September 28, 2012)
ID - Insufficient data to develop criterion
NLV - Hazardous substance is not likely to volatilize under most conditions
NA - Criterion or value is not available

Perimeter Status (1) - N - non-perimeter, Y - perimeter
mg/L - miligram per liter
NTU - Nephelometric Turbidity Unit

Notes:
U - Not detected at the associated reporting limit.
J - Estimated concentration.
UJ - Not detected; associated reporting limit is estimated.

TABLE 3.9

PART 201 CRITERIA EXCEEDANCES - GROUNDWATER
2013 RFI REPORT
FORMER GENRERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation		*WEST01*	*WEST01*	*WEST01*	*WEST01*	*WEST01*	*WEST01*	*WEST01*	*WEST02*	*WEST02*	*WEST02*	*WEST02*	*WEST02*	*WEST02*	*WEST02*	*WEST02*	*WEST02*	*WEST02*
Aquifer		*Intermediate*	*Intermediate*	*Intermediate*	*Intermediate*	*Intermediate*	*Shallow*	*Shallow*	*Deep*	*Deep*	*Deep*	*Intermediate*	*Intermediate*	*Intermediate*	*Intermediate*	*Intermediate*	*Intermediate*	*Intermediate*
Perimeter Status (1)		*N*	*N*	*N*	*N*	*N*	*N*	*N*	*Y*	*Y*	*Y*	*N*	*N*	*N*	*N*	*N*	*Y*	*Y*
Sample Location		*CRA-720I*	*CRA-735I*	*CRA-735I*	*CRA-736I*	*CRA-736I*	*CRA-713M*	*CRA-713M*	*CRA-726D*	*CRA-726D*	*CRA-726D*	*CRA-731I*	*CRA-731I*	*CRA-732I*	*CRA-732I*	*CRA-732I*	*CRA-726I*	*CRA-726I*
Sample Identification (GW-17358-)		*041213-JY-098*	*042512-DR-1094*	*041213-DR-099*	*042512-DR-1093*	*041213-DR-100*	*042512-DR-1095*	*041613-DR-113*	*042512-CB-1100*	*041013-DR-081*	*041113-DR-087*	*041712-DR-1043*	*040113-DR-006*	*041812-DR-1050*	*041812-DR-1051*	*040113-JY-002*	*042512-CB-1099*	*041013-DR-080*
Sample Date		*4/12/2013*	*4/25/2012*	*4/12/2013*	*4/25/2012*	*4/12/2013*	*4/25/2012*	*4/16/2013*	*4/25/2012*	*4/10/2013*	*4/11/2013*	*4/17/2012*	*4/1/2013*	*4/18/2012*	*4/18/2012*	*4/1/2013*	*4/25/2012*	*4/10/2013*
Sample Type															*Duplicate*			
Volatile Organic Compounds (VOCs)	***Units***																	
1,1,1-Trichloroethane	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,1,2,2-Tetrachloroethane	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,1,2-Trichloroethane	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,1-Dichloroethane	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,1-Dichloroethene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,2,4-Trichlorobenzene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,2-Dibromo-3-chloropropane (DBCP)	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,2-Dibromoethane (Ethylene dibromide)	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,2-Dichlorobenzene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,2-Dichloroethane	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,2-Dichloropropane	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,3-Dichlorobenzene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,4-Dichlorobenzene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
2-Butanone (Methyl ethyl ketone) (MEK)	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
2-Hexanone	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Acetone	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.003 J	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Benzene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Bromodichloromethane	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Bromoform	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Bromomethane (Methyl bromide)	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Carbon disulfide	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.00022 J	0.005 U	0.005 U	0.0019 J	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Carbon tetrachloride	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Chlorobenzene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Chloroethane	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Chloroform (Trichloromethane)	mg/L	0.001 U	0.001 U	0.001 U	0.00046 J	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Chloromethane (Methyl chloride)	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
cis-1,2-Dichloroethene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.00043 J	0.00036 J	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
cis-1,3-Dichloropropene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Cyclohexane	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Dibromochloromethane	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Dichlorodifluoromethane (CFC-12)	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Ethylbenzene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Isopropyl benzene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Methyl acetate	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Methyl cyclohexane	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Methyl tert butyl ether (MTBE)	mg/L	0.001 U	0.005 U	0.001 U	0.005 U	0.001 U	0.005 U	0.001 U	0.005 U	0.001 U	0.001 U	0.005 U	0.001 U	0.005 U	0.005 U	0.001 U	0.005 U	0.001 U
Methylene chloride	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Styrene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Tetrachloroethene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Toluene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
trans-1,2-Dichloroethene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
trans-1,3-Dichloropropene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Trichloroethene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.00029 J	0.00022 J	0.0036	0.001 U	0.001 U
Trichlorofluoromethane (CFC-11)	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Trifluorotrichloroethane (Freon 113)	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Vinyl chloride	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Xylenes (total)	mg/L	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U

TABLE 3.9

PART 201 CRITERIA EXCEEDANCES - GROUNDWATER
2013 RFI REPORT
FORMER GENRERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation		*WEST01*	*WEST01*	*WEST01*	*WEST01*	*WEST01*	*WEST01*	*WEST01*	*WEST02*	*WEST02*	*WEST02*	*WEST02*	*WEST02*	*WEST02*	*WEST02*	*WEST02*	*WEST02*
Aquifer		*Intermediate*	*Intermediate*	*Intermediate*	*Intermediate*	*Intermediate*	*Shallow*	*Shallow*	*Deep*	*Deep*	*Deep*	*Intermediate*	*Intermediate*	*Intermediate*	*Intermediate*	*Intermediate*	*Intermediate*
Perimeter Status (1)		*N*	*N*	*N*	*N*	*N*	*N*	*N*	*Y*	*Y*	*Y*	*N*	*N*	*N*	*N*	*N*	*Y*
Sample Location		*CRA-720I*	*CRA-735I*	*CRA-735I*	*CRA-736I*	*CRA-736I*	*CRA-713M*	*CRA-713M*	*CRA-726D*	*CRA-726D*	*CRA-726D*	*CRA-731I*	*CRA-731I*	*CRA-732I*	*CRA-732I*	*CRA-732I*	*CRA-726I*
Sample Identification (GW-17358-)		*041213-JY-098*	*042512-DR-1094*	*041213-DR-099*	*042512-DR-1093*	*041213-DR-100*	*042512-DR-1095*	*041613-DR-113*	*042512-CB-1100*	*041013-DR-081*	*041113-DR-087*	*041712-DR-1043*	*040113-DR-006*	*041812-DR-1050*	*041812-DR-1051*	*040113-JY-002*	*042512-CB-1099*
Sample Date		*4/12/2013*	*4/25/2012*	*4/12/2013*	*4/25/2012*	*4/12/2013*	*4/25/2012*	*4/16/2013*	*4/25/2012*	*4/10/2013*	*4/11/2013*	*4/17/2012*	*4/1/2013*	*4/18/2012*	*4/18/2012*	*4/1/2013*	*4/25/2012*
Sample Type															*Duplicate*		
Semi-Volatile Organic Compounds (SVOCs)																	
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	mg/L	0.0048 U	0.005 U	0.0053 U	0.005 U	0.0052 U	0.0051 U	0.0052 U	0.0053 U	0.0051 U	0.0051 U	0.0051 U	0.0051 U	0.0049 U	0.0049 U	0.0048 U	0.0059 U	0.0049 U
2,4,5-Trichlorophenol	mg/L	0.0048 U	0.005 U	0.0053 U	0.005 U	0.0052 U	0.0051 U	0.0052 U	0.0053 U	0.0051 U	0.0051 U	0.0051 U	0.0051 U	0.0049 U	0.0049 U	0.0048 U	0.0059 U	0.0049 U
2,4,6-Trichlorophenol	mg/L	0.0038 U	0.004 U	0.0042 U	0.004 U	0.0041 U	0.004 U	0.0042 U	0.0042 U	0.004 U	0.0041 U	0.004 U	0.004 U	0.0039 U	0.0039 U	0.0038 U	0.0047 U	0.0039 U
2,4-Dichlorophenol	mg/L	0.0095 U	0.01 U	0.011 U	0.01 U	0.01 U	0.01 U	0.01 U	0.011 U	0.01 U	0.01 U	0.01 U	0.01 U	0.0098 U	0.0097 U	0.0095 U	0.012 U	0.0098 U
2,4-Dimethylphenol	mg/L	0.0048 U	0.005 U	0.0053 U	0.005 U	0.0052 U	0.0051 U	0.0052 U	0.0053 U	0.0051 U	0.0051 U	0.0051 U	0.0051 U	0.0049 U	0.0049 U	0.0048 U	0.0059 U	0.0049 U
2,4-Dinitrophenol	mg/L	0.019 U	0.02 U	0.021 U	0.02 U	0.021 U	0.02 U	0.021 U	0.021 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.019 U	0.019 U	0.024 U	0.02 U
2,4-Dinitrotoluene	mg/L	0.0048 U	0.005 U	0.0053 U	0.005 U	0.0052 U	0.0051 U	0.0052 U	0.0053 U	0.0051 U	0.0051 U	0.0051 U	0.0051 U	0.0049 U	0.0049 U	0.0048 U	0.0059 U	0.0049 U
2,6-Dinitrotoluene	mg/L	0.0048 U	0.005 U	0.0053 U	0.005 U	0.0052 U	0.0051 U	0.0052 U	0.0053 U	0.0051 U	0.0051 U	0.0051 U	0.0051 U	0.0049 U	0.0049 U	0.0048 U	0.0059 U	0.0049 U
2-Chloronaphthalene	mg/L	0.0048 U	0.005 U	0.0053 U	0.005 U	0.0052 U	0.0051 U	0.0052 U	0.0053 U	0.0051 U	0.0051 U	0.0051 U	0.0051 U	0.0049 U	0.0049 U	0.0048 U	0.0059 U	0.0049 U
2-Chlorophenol	mg/L	0.0048 U	0.005 U	0.0053 U	0.005 U	0.0052 U	0.0051 U	0.0052 U	0.0053 U	0.0051 U	0.0051 U	0.0051 U	0.0051 U	0.0049 U	0.0049 U	0.0048 U	0.0059 U	0.0049 U
2-Methylnaphthalene	mg/L	0.0048 U	0.005 U	0.0053 U	0.005 U	0.0052 U	0.0051 U	0.0052 U	0.0053 U	0.0051 U	0.0051 U	0.00016 J	0.00022 J	0.0049 U	0.0049 U	0.0048 U	0.0059 U	0.0049 U
2-Methylphenol	mg/L	0.0048 U	0.005 U	0.0053 U	0.005 U	0.0052 U	0.0051 U	0.0052 U	0.0053 U	0.0051 U	0.0051 U	0.0051 U	0.0051 U	0.0049 U	0.0049 U	0.0048 U	0.0059 U	0.0049 U
2-Nitroaniline	mg/L	0.019 U	0.02 U	0.021 U	0.02 U	0.021 U	0.02 U	0.021 U	0.021 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.019 U	0.019 U	0.024 U	0.02 U
2-Nitrophenol	mg/L	0.0048 U	0.005 U	0.0053 U	0.005 U	0.0052 U	0.0051 U	0.0052 U	0.0053 U	0.0051 U	0.0051 U	0.0051 U	0.0051 U	0.0049 U	0.0049 U	0.0048 U	0.0059 U	0.0049 U
3&4-Methylphenol	mg/L	0.0048 U	0.005 U	0.0053 U	0.005 U	0.0052 U	0.0051 U	0.0052 U	0.0053 U	0.0051 U	0.0051 U	0.0051 U	0.0051 U	0.0049 U	0.0049 U	0.0048 U	0.0059 U	0.0049 U
3,3'-Dichlorobenzidine	mg/L	0.00095 U	0.001 U	0.0011 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0011 U	0.001 U	0.001 U	0.001 U	0.001 U	0.00098 U	0.00097 U	0.00095 U	0.0012 U	0.00098 U
3-Nitroaniline	mg/L	0.019 U	0.02 U	0.021 U	0.02 U	0.021 U	0.02 U	0.021 U	0.021 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.019 U	0.019 U	0.024 U	0.02 U
4,6-Dinitro-2-methylphenol	mg/L	0.019 U	0.02 U	0.021 U	0.02 U	0.021 U	0.02 U	0.021 U	0.021 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.019 U	0.019 U	0.024 U	0.02 U
4-Bromophenyl phenyl ether	mg/L	0.0048 U	0.005 U	0.0053 U	0.005 U	0.0052 U	0.0051 U	0.0052 U	0.0053 U	0.0051 U	0.0051 U	0.0051 U	0.0051 U	0.0049 U	0.0049 U	0.0048 U	0.0059 U	0.0049 U
4-Chloro-3-methylphenol	mg/L	0.0048 U	0.005 U	0.0053 U	0.005 U	0.0052 U	0.0051 U	0.0052 U	0.0053 U	0.0051 U	0.0051 U	0.0051 U	0.0051 U	0.0049 U	0.0049 U	0.0048 U	0.0059 U	0.0049 U
4-Chloroaniline	mg/L	0.0095 U	0.01 U	0.011 U	0.01 U	0.01 U	0.01 U	0.01 U	0.011 U	0.01 U	0.01 U	0.01 U	0.01 U	0.0098 U	0.0097 U	0.0095 U	0.012 U	0.0098 U
4-Chlorophenyl phenyl ether	mg/L	0.0048 U	0.005 U	0.0053 U	0.005 U	0.0052 U	0.0051 U	0.0052 U	0.0053 U	0.0051 U	0.0051 U	0.0051 U	0.0051 U	0.0049 U	0.0049 U	0.0048 U	0.0059 U	0.0049 U
4-Nitroaniline	mg/L	0.019 U	0.02 U	0.021 U	0.02 U	0.021 U	0.02 U	0.021 U	0.021 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.019 U	0.019 U	0.024 U	0.02 U
4-Nitrophenol	mg/L	0.019 U	0.02 U	0.021 U	0.02 U	0.021 U	0.02 U	0.021 U	0.021 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.019 U	0.019 U	0.024 U	0.02 U
Acenaphthene	mg/L	0.0048 U	0.005 U	0.0053 U	0.005 U	0.0052 U	0.0051 U	0.0052 U	0.0053 U	0.0051 U	0.0051 U	0.0051 U	0.0051 U	0.0049 U	0.0049 U	0.0048 U	0.0059 U	0.0049 U
Acenaphthylene	mg/L	0.0048 U	0.005 U	0.0053 U	0.005 U	0.0052 U	0.0051 U	0.0052 U	0.0053 U	0.0051 U	0.0051 U	0.0051 U	0.0051 U	0.0049 U	0.0049 U	0.0048 U	0.0059 U	0.0049 U
Acetophenone	mg/L	0.0048 U	0.005 U	0.0053 U	0.005 U	0.0052 U	0.0051 U	0.0052 U	0.0053 U	0.0051 U	0.0051 U	0.0051 U	0.0051 U	0.0049 U	0.0049 U	0.0048 U	0.0059 U	0.0049 U
Anthracene	mg/L	0.0048 U	0.005 U	0.0053 U	0.005 U	0.0052 U	0.0051 U	0.0052 U	0.0053 U	0.0051 U	0.0051 U	0.0051 U	0.0051 U	0.0049 U	0.0049 U	0.0048 U	0.0059 U	0.0049 U
Atrazine	mg/L	0.0029 U	0.003 U	0.0032 U	0.003 U	0.0031 U	0.003 U	0.0031 U	0.0032 U	0.003 U	0.0031 U	0.003 U	0.003 U	0.0029 U	0.0029 U	0.0029 U	0.0035 U	0.0029 U
Benzaldehyde	mg/L	0.0048 U	0.005 U	0.0053 U	0.005 U	0.0052 U	0.0051 U	0.0052 U	0.0053 U	0.0051 U	0.0051 U	0.0051 U	0.0051 U	0.0049 U	0.0049 U	0.0048 U	0.0059 U	0.0049 U
Benzo(a)anthracene	mg/L	0.00095 U	0.001 U	0.0011 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0011 U	0.001 U	0.001 U	0.001 U	0.001 U	0.00098 U	0.00097 U	0.00095 U	0.0012 U	0.00098 U
Benzo(a)pyrene	mg/L	0.00095 U	0.001 U	0.0011 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0011 U	0.001 U	0.001 U	0.001 U	0.001 U	0.00098 U	0.00097 U	0.00095 U	0.0012 U	0.00098 U
Benzo(b)fluoranthene	mg/L	0.00095 U	0.001 U	0.0011 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0011 U	0.001 U	0.001 U	0.001 U	0.001 U	0.00098 U	0.00097 U	0.00095 U	0.0012 U	0.00098 U
Benzo(g,h,i)perylene	mg/L	0.00095 U	0.001 U	0.0011 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0011 U	0.001 U	0.001 U	0.001 U	0.001 U	0.00098 U	0.00097 U	0.00095 U	0.0012 U	0.00098 U
Benzo(k)fluoranthene	mg/L	0.00095 U	0.001 U	0.0011 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0011 U	0.001 U	0.001 U	0.001 U	0.001 U	0.00098 U	0.00097 U	0.00095 U	0.0012 U	0.00098 U
Biphenyl (1,1-Biphenyl)	mg/L	0.0048 U	0.005 U	0.0053 U	0.005 U	0.0052 U	0.0051 U	0.0052 U	0.0053 U	0.0051 U	0.0051 U	0.0051 U	0.0051 U	0.0049 U	0.0049 U	0.0048 U	0.0059 U	0.0049 U
bis(2-Chloroethoxy)methane	mg/L	0.0048 U	0.005 U	0.0053 U	0.005 U	0.0052 U	0.0051 U	0.0052 U	0.0053 U	0.0051 U	0.0051 U	0.0051 U	0.0051 U	0.0049 U	0.0049 U	0.0048 U	0.0059 U	0.0049 U
bis(2-Chloroethyl)ether	mg/L	0.00095 U	0.001 U	0.0011 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0011 U	0.001 U	0.001 U	0.001 U	0.001 U	0.00098 U	0.00097 U	0.00095 U	0.0012 U	0.00098 U
bis(2-Ethylhexyl)phthalate (DEHP)	mg/L	0.0048 U	0.005 U	0.001 J	0.005 U	0.0013 J	0.0051 U	0.0052 U	0.0053 U	0.0051 U	0.0051 U	0.0051 U	0.0051 U	0.0049 U	0.00092 J	0.0048 U	0.0025 J	0.0049 U
Butyl benzylphthalate (BBP)	mg/L	0.0048 U	0.005 U	0.0053 U	0.005 U	0.0052 U	0.0051 U	0.0052 U	0.0053 U	0.0051 U	0.0051 U	0.0051 U	0.0051 U	0.0049 U	0.0049 U	0.0048 U	0.0059 U	0.0049 U
Caprolactam	mg/L	0.0095 U	0.01 U	0.011 U	0.01 U	0.01 U	0.01 U	0.01 U	0.011 U	0.01 U	0.01 U	0.01 U	0.01 U	0.0098 U	0.0097 U	0.0095 U	0.012 U	0.0098 U
Carbazole	mg/L	0.0095 U	0.01 U	0.011 U	0.01 U	0.01 U	0.01 U	0.01 U	0.011 U	0.01 U	0.01 U	0.01 U	0.01 U	0.0098 U	0.0097 U	0.0095 U	0.012 U	0.0098 U
Chrysene	mg/L	0.00095 U	0.001 U	0.0011 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0011 U	0.001 U	0.001 U	0.001 U	0.001 U	0.00098 U	0.00097 U	0.00095 U	0.0012 U	0.00098 U
Dibenz(a,h)anthracene	mg/L	0.0019 U	0.002 U	0.0021 U	0.002 U	0.0021 U	0.002 U	0.0021 U	0.0021 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.0019 U	0.0019 U	0.0024 U	0.002 U
Dibenzofuran	mg/L	0.0038 U	0.004 U	0.0042 U	0.004 U	0.0041 U	0.004 U	0.0042 U	0.0042 U	0.004 U	0.0041 U	0.00018 J	0.004 U	0.0039 U	0.0039 U	0.0038 U	0.0047 U	0.0039 U
Diethyl phthalate	mg/L	0.0048 U	0.005 U	0.0053 U	0.005 U	0.0052 U	0.0051 U	0.0052 U	0.0053 U	0.0051 U	0.0051 U	0.0051 U	0.0051 U	0.0049 U	0.0049 U	0.0048 U	0.0059 U	0.0049 U
Dimethyl phthalate	mg/L	0.0048 U	0.005 U	0.0053 U	0.005 U	0.0052 U	0.0051 U	0.0052 U	0.0053 U	0.0051 U	0.0051 U	0.0051 U	0.0051 U	0.0049 U	0.0049 U	0.0048 U	0.0059 U	0.0049 U
Di-n-butylphthalate (DBP)	mg/L	0.0048 U	0.005 U	0.0053 U	0.005 U	0.0052 U	0.0051 U	0.0052 U	0.0053 U	0.0051 U	0.0051 U	0.0051 U	0.0051 U	0.0049 U	0.0049 U	0.0048 U	0.0059 U	0.0049 U
Di-n-octyl phthalate (DnOP)	mg/L	0.0048 U	0.005 U	0.0053 U	0.005 U	0.0052 U	0.0051 U	0.0052 U	0.0053 U	0.0051 U	0.0051 U	0.0051 U	0.0051 U	0.0049 U	0.0049 U	0.0048 U	0.0059 U	0.0049 U
Fluoranthene	mg/L	0.00095 U	0.001 U	0.0011 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0011 U	0.001 U	0.001 U	0.001 U	0.001 U	0.00098 U	0.00097 U	0.00095 U	0.0012 U	0.00098 U
Fluorene	mg/L	0.0048 U	0.005 U	0.0053 U	0.005 U	0.0052 U	0.0051 U	0.0052 U	0.0053 U	0.0051 U	0.0051 U	0.00014 J	0.0002 J	0.0049 U	0.0049 U	0.0048 U	0.0059 U	0.0049 U
Hexachlorobenzene	mg/L	0.00019 U	0.0002 U	0.00021 U	0.0002 U	0.00021 U	0.0002 U	0.00021 U	0.00021 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.00019 U	0.00019 U	0.00024 U	0.0002 U

TABLE 3.9

PART 201 CRITERIA EXCEEDANCES - GROUNDWATER
2013 RFI REPORT
FORMER GENRERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation		*WEST01*	*WEST01*	*WEST01*	*WEST01*	*WEST01*	*WEST01*	*WEST01*	*WEST02*	*WEST02*	*WEST02*	*WEST02*	*WEST02*	*WEST02*	*WEST02*	*WEST02*	*WEST02*	*WEST02*
Aquifer		*Intermediate*	*Intermediate*	*Intermediate*	*Intermediate*	*Intermediate*	*Shallow*	*Shallow*	*Deep*	*Deep*	*Deep*	*Intermediate*	*Intermediate*	*Intermediate*	*Intermediate*	*Intermediate*	*Intermediate*	*Intermediate*
Perimeter Status (1)		*N*	*N*	*N*	*N*	*N*	*N*	*N*	*Y*	*Y*	*Y*	*N*	*N*	*N*	*N*	*N*	*Y*	*Y*
Sample Location		*CRA-720I*	*CRA-735I*	*CRA-735I*	*CRA-736I*	*CRA-736I*	*CRA-713M*	*CRA-713M*	*CRA-726D*	*CRA-726D*	*CRA-726D*	*CRA-731I*	*CRA-731I*	*CRA-732I*	*CRA-732I*	*CRA-732I*	*CRA-726I*	*CRA-726I*
Sample Identification (GW-17358-)		*041213-JY-098*	*042512-DR-1094*	*041213-DR-099*	*042512-DR-1093*	*041213-DR-100*	*042512-DR-1095*	*041613-DR-113*	*042512-CB-1100*	*041013-DR-081*	*041113-DR-087*	*041712-DR-1043*	*040113-DR-006*	*041812-DR-1050*	*041812-DR-1051*	*040113-JY-002*	*042512-CB-1099*	*041013-DR-080*
Sample Date		*4/12/2013*	*4/25/2012*	*4/12/2013*	*4/25/2012*	*4/12/2013*	*4/25/2012*	*4/16/2013*	*4/25/2012*	*4/10/2013*	*4/11/2013*	*4/17/2012*	*4/1/2013*	*4/18/2012*	*4/18/2012*	*4/1/2013*	*4/25/2012*	*4/10/2013*
Sample Type															*Duplicate*			
SVOCs Continued																		
Hexachlorobutadiene	mg/L	0.00095 U	0.001 U	0.0011 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0011 U	0.001 U	0.001 U	0.001 U	0.001 U	0.00098 U	0.00097 U	0.00095 U	0.0012 U	0.00098 U
Hexachlorocyclopentadiene	mg/L	0.0048 U	0.005 U	0.0053 U	0.005 U	0.0052 U	0.0051 U	R	0.0053 U	0.0051 U	0.0051 U	0.0051 U	R	0.0049 U	0.0049 U	R	0.0059 U	0.0049 U
Hexachloroethane	mg/L	0.0048 U	0.005 U	0.0053 U	0.005 U	0.0052 U	0.0051 U	0.0052 U	0.0053 U	0.0051 U	0.0051 U	0.0051 U	0.0051 U	0.0049 U	0.0049 U	0.0048 U	0.0059 U	0.0049 U
Indeno(1,2,3-cd)pyrene	mg/L	0.0019 U	0.002 U	0.0021 U	0.002 U	0.0021 U	0.002 U	0.0021 U	0.0021 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.0019 U	0.0019 U	0.0024 U	0.002 U
Isophorone	mg/L	0.0048 U	0.005 U	0.0053 U	0.005 U	0.0052 U	0.0051 U	0.0052 U	0.0053 U	0.0051 U	0.0051 U	0.0051 U	0.0051 U	0.0049 U	0.0049 U	0.0048 U	0.0059 U	0.0049 U
Naphthalene	mg/L	0.0048 U	0.005 U	0.0053 U	0.005 U	0.0052 U	0.0051 U	0.0052 U	0.0053 U	0.0051 U	0.0051 U	0.0051 U	0.0051 U	0.0049 U	0.0049 U	0.0048 U	0.0059 U	0.0049 U
Nitrobenzene	mg/L	0.0029 U	0.003 U	0.0032 U	0.003 U	0.0031 U	0.003 U	0.0031 U	0.0032 U	0.003 U	0.0031 U	0.003 U	0.003 U	0.0029 U	0.0029 U	0.0029 U	0.0035 U	0.0029 U
N-Nitrosodi-n-propylamine	mg/L	0.0048 U	0.005 U	0.0053 U	0.005 U	0.0052 U	0.0051 U	0.0052 U	0.0053 U	0.0051 U	0.0051 U	0.0051 U	0.0051 U	0.0049 U	0.0049 U	0.0048 U	0.0059 U	0.0049 U
N-Nitrosodiphenylamine	mg/L	0.0048 U	0.005 U	0.0053 U	0.005 U	0.0052 U	0.0051 U	0.0052 U	0.0053 U	0.0051 U	0.0051 U	0.0051 U	0.0051 U	0.0049 U	0.0049 U	0.0048 U	0.0059 U	0.0049 U
Pentachlorophenol	mg/L	0.0048 U	0.005 U	0.0053 U	0.005 U	0.0052 U	0.0051 U	0.0052 U	0.0053 U	0.0051 U	0.0051 U	0.0051 U	0.0051 U	0.0049 U	0.0049 U	0.0048 U	0.0059 U	0.0049 U
Phenanthrene	mg/L	0.0019 U	0.002 U	0.0021 U	0.002 U	0.0021 U	0.002 U	0.0021 U	0.0021 U	0.002 U	0.002 U	0.00021 J	0.00023 J	0.002 U	0.0019 U	0.0019 U	0.0024 U	0.002 U
Phenol	mg/L	0.0048 U	0.005 U	0.0053 U	0.005 U	0.0052 U	0.0051 U	0.0052 U	0.0053 U	0.0051 U	0.0051 U	0.0051 U	0.0051 U	0.0049 U	0.0049 U	0.0048 U	0.0059 U	0.0049 U
Pyrene	mg/L	0.0048 U	0.005 U	0.0053 U	0.005 U	0.0052 U	0.0051 U	0.0052 U	0.0053 U	0.0051 U	0.0051 U	0.0051 U	0.0051 U	0.0049 U	0.0049 U	0.0048 U	0.0059 U	0.0049 U
Metals																		
Aluminum	mg/L	0.05 U	0.047 J	0.05 U	0.026 J	0.05 U	**0.24[b]**	**0.24 J[b]**	**0.2[ab]**	**3.5 J[ab]**	**29 J[ab]**	**0.06[b]**	0.019 J	0.021 J	0.024 J	0.05 U	**0.34[ab]**	0.019 J
Aluminum (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	**11[ab]**	-	-	-	-	-	-	-
Antimony	mg/L	0.002 U	0.00025 J	0.002 U	0.00027 J	0.002 U	0.00035 J	0.002 U	0.00041 J	0.002 U	0.002 U	0.002 U	0.002 U	0.00031 J	0.00044 J	0.002 U	0.0042	0.002 U
Antimony (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	0.002 U	-	-	-	-	-	-	-
Arsenic	mg/L	**0.018[bc]**	0.0091	0.0059	0.0077	**0.012[bc]**	0.00086 J	0.00052 J	0.00086 J	**0.012[abc]**	**0.02[abc]**	**0.033[bc]**	**0.04[bc]**	**0.015[bc]**	**0.016[bc]**	**0.018[bc]**	**0.072[abc]**	0.0008 J
Arsenic (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	**0.014[abc]**	-	-	-	-	-	-	-
Barium	mg/L	0.26	0.43	0.26	0.32	0.28	0.069 J	0.055 J	0.073 J	0.077 J	0.28	0.1	0.082 J	0.14	0.14	0.12	0.73	0.11
Barium (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	0.15	-	-	-	-	-	-	-
Beryllium	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.00022 J	0.0014	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.00057 J
Beryllium (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	0.00053 J	-	-	-	-	-	-	-
Cadmium	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.000055 J	0.001 U	0.00014 J	0.00031 J	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.00033 J
Cadmium (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	0.001 U	-	-	-	-	-	-	-
Calcium	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chromium	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.0009 J	0.01 U	0.008 J	**0.053[c]**	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Chromium (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	**0.021[c]**	-	-	-	-	-	-	-
Chromium III (trivalent)	mg/L	-	-	-	-	-	0.01 U	-	-	-	-	-	-	-	-	-	-	-
Chromium VI (hexavalent)	mg/L	-	-	-	-	-	0.01 U	-	-	-	-	-	-	-	-	-	-	-
Cobalt	mg/L	0.0002 J	0.00056 J	0.000064 J	0.02 U	0.000069 J	0.00066 J	0.00081 J	0.02 U	0.0028 J	0.019 J	0.00065 J	0.00026 J	0.00055 J	0.00068 J	0.00069 J	0.0036 J	0.00049 J
Cobalt (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	0.0089 J	-	-	-	-	-	-	-
Copper	mg/L	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.0067 J	**0.034[c]**	0.004 U	0.0004 J	0.004 U	0.0014 J	0.004 U	0.0007 J	0.004 U
Copper (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	0.019	-	-	-	-	-	-	-
Iron	mg/L	**2.9[b]**	**1.1[b]**	**0.38[b]**	0.2 U	**1.3[b]**	0.19 J	**0.39[b]**	0.14 J	**5.2[ab]**	**44[ab]**	**2.2[b]**	**1.2[b]**	0.22	0.24	**0.34[b]**	**4.4[ab]**	0.2 U
Iron (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	**19[ab]**	-	-	-	-	-	-	-
Lead	mg/L	0.0022 J	0.0025 J	0.0012 J	0.003 U	0.0011 J	0.003 U	0.00059 J	0.003 U	0.0038	**0.015[ab]**	0.00092 J	0.00033 J	0.003 U	0.00023 J	0.003 U	0.00044 J	0.0004 J
Lead (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	**0.0069[ab]**	-	-	-	-	-	-	-
Magnesium	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Manganese	mg/L	**0.12[b]**	**0.17[b]**	**0.09[b]**	**0.21[b]**	**0.15[b]**	**0.14[b]**	**0.11[b]**	**0.056[ab]**	**0.072[ab]**	**0.69[ab]**	**0.053[b]**	0.04 J	**0.12[b]**	**0.12[b]**	**0.12[b]**	**3.1[ab]**	**0.052[ab]**
Manganese (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	**0.33[ab]**	-	-	-	-	-	-	-
Mercury	mg/L	0.0002 U	0.08 U	0.0002 U	0.04 U	0.0002 U	0.04 U	0.0002 U	0.04 U	0.0002 U	0.0002 U	0.04 U	0.0002 U	0.04 U	0.04 U	0.0002 U	0.04 U	0.0002 U
Mercury (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	0.0002 U	-	-	-	-	-	-	-
Nickel	mg/L	0.02 U	0.0013 J	0.02 U	0.02 U	0.02 U	0.0037 J	0.0025 J	0.0015 J	0.0092 J	0.055	0.046	0.031	0.0016 J	0.0018 J	0.02 U	0.024	0.0012 J
Nickel (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	0.028	-	-	-	-	-	-	-
Potassium	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Selenium	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.0025 J	0.0043 J	0.00064 J	0.005 U	0.0026 J	0.005 U	0.005 U	0.005 U	0.00057 J	0.005 U	0.005 U	0.0012 J
Selenium (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	0.0019 J	-	-	-	-	-	-	-
Silver	mg/L	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.000089 J	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Silver (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	0.0002 U	-	-	-	-	-	-	-
Sodium	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

TABLE 3.9

PART 201 CRITERIA EXCEEDANCES - GROUNDWATER
2013 RFI REPORT
FORMER GENRERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation		*WEST01*	*WEST01*	*WEST01*	*WEST01*	*WEST01*	*WEST01*	*WEST01*	*WEST02*	*WEST02*	*WEST02*	*WEST02*	*WEST02*	*WEST02*	*WEST02*	*WEST02*	*WEST02*	*WEST02*
Aquifier		*Intermediate*	*Intermediate*	*Intermediate*	*Intermediate*	*Intermediate*	*Shallow*	*Shallow*	*Deep*	*Deep*	*Deep*	*Intermediate*	*Intermediate*	*Intermediate*	*Intermediate*	*Intermediate*	*Intermediate*	*Intermediate*
Perimeter Status (1)		*N*	*N*	*N*	*N*	*N*	*N*	*N*	*Y*	*Y*	*Y*	*N*	*N*	*N*	*N*	*N*	*Y*	*Y*
Sample Location		*CRA-720I*	*CRA-735I*	*CRA-735I*	*CRA-736I*	*CRA-736I*	*CRA-713M*	*CRA-713M*	*CRA-726D*	*CRA-726D*	*CRA-726D*	*CRA-731I*	*CRA-731I*	*CRA-732I*	*CRA-732I*	*CRA-732I*	*CRA-726I*	*CRA-726I*
Sample Identification (GW-17358-)		*041213-JY-098*	*042512-DR-1094*	*041213-DR-099*	*042512-DR-1093*	*041213-DR-100*	*042512-DR-1095*	*041613-DR-113*	*042512-CB-1100*	*041013-DR-081*	*041113-DR-087*	*041712-DR-1043*	*040113-DR-006*	*041812-DR-1050*	*041812-DR-1051*	*040113-JY-002*	*042512-CB-1099*	*041013-DR-080*
Sample Date		*4/12/2013*	*4/25/2012*	*4/12/2013*	*4/25/2012*	*4/12/2013*	*4/25/2012*	*4/16/2013*	*4/25/2012*	*4/10/2013*	*4/11/2013*	*4/17/2012*	*4/1/2013*	*4/18/2012*	*4/18/2012*	*4/1/2013*	*4/25/2012*	*4/10/2013*
Sample Type															*Duplicate*			
Metals Continued																		
Thallium	mg/L	0.002 U	0.00028 J	0.002 U	0.0005 J	0.002 U	0.00071 J	0.002 U	0.002 U	0.00087 J	0.00083 J	0.002 U	0.002 U	0.002 U	0.002 U	0.00024 J	0.002 U	0.0013 J
Thallium (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	0.00051 J	-	-	-	-	-	-	-
Vanadium	mg/L	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.0011 J	0.0013 J	0.00061 J	**0.01**[a]	**0.078**[abc]	0.0017 J	0.0019 J	0.004 U	0.004 U	0.004 U	0.0014 J	0.004 U
Vanadium (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	**0.028**[ac]	-	-	-	-	-	-	-
Zinc	mg/L	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.16	0.15 U	0.05 U	0.05 U	0.05 U	0.0073 J	0.05 U	0.05 U	0.05 U
Zinc (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	0.11 U	-	-	-	-	-	-	-
Polychlorinated Biphenyls (PCBs)																		
Aroclor-1016 (PCB-1016)	mg/L	0.000095 U	0.000099 U	0.00011 U	0.000099 U	0.0001 U	0.0001 U	0.00011 U	0.00011 U	0.000098 U	0.000096 U	0.000099 U	0.0001 U	0.0001 U	0.0001 U	0.000095 U	0.000095 U	0.000097 U
Aroclor-1221 (PCB-1221)	mg/L	0.000095 U	0.000099 U	0.00011 U	0.000099 U	0.0001 U	0.0001 U	0.00011 U	0.00011 U	0.000098 U	0.000096 U	0.000099 U	0.0001 U	0.0001 U	0.0001 U	0.000095 U	0.000095 U	0.000097 U
Aroclor-1232 (PCB-1232)	mg/L	0.000095 U	0.000099 U	0.00011 U	0.000099 U	0.0001 U	0.0001 U	0.00011 U	0.00011 U	0.000098 U	0.000096 U	0.000099 U	0.0001 U	0.0001 U	0.0001 U	0.000095 U	0.000095 U	0.000097 U
Aroclor-1242 (PCB-1242)	mg/L	0.000095 U	0.000099 U	0.00011 U	0.000099 U	0.0001 U	0.0001 U	0.00011 U	0.00011 U	0.000098 U	0.000096 U	0.000099 U	0.0001 U	0.0001 U	0.0001 U	0.000095 U	0.000095 U	0.000097 U
Aroclor-1248 (PCB-1248)	mg/L	0.000095 U	0.000099 U	0.00011 U	0.000099 U	0.0001 U	0.0001 U	0.00011 U	0.00011 U	0.000098 U	0.000096 U	0.000099 U	0.0001 U	0.0001 U	0.0001 U	0.000095 U	0.000095 U	0.000097 U
Aroclor-1254 (PCB-1254)	mg/L	0.000095 U	**0.00021**[c]	0.00011 U	0.000099 U	0.0001 U	0.0001 U	0.00011 U	0.000038 J	0.000098 U	0.000096 U	0.000099 U	0.0001 U	0.0001 U	0.0001 U	0.000095 U	0.000034 J	0.000097 U
Aroclor-1260 (PCB-1260)	mg/L	0.000095 U	0.000099 U	0.00011 U	0.000099 U	0.0001 U	0.0001 U	0.00011 U	0.00011 U	0.000098 U	0.000096 U	0.000099 U	0.0001 U	0.0001 U	0.0001 U	0.000095 U	0.000095 U	0.000097 U
Aroclor-1262 (PCB-1262)	mg/L	0.000095 U	0.000099 U	0.00011 U	0.000099 U	0.0001 U	0.0001 U	0.00011 U	0.00011 U	0.000098 U	0.000096 U	0.000099 U	0.0001 U	0.0001 U	0.0001 U	0.000095 U	0.000095 U	0.000097 U
Aroclor-1268 (PCB-1268)	mg/L	0.000095 U	0.000099 U	0.00011 U	0.000099 U	0.0001 U	0.0001 U	0.00011 U	0.00011 U	0.000098 U	0.000096 U	0.000099 U	0.0001 U	0.0001 U	0.0001 U	0.000095 U	0.000095 U	0.000097 U
Total PCBs	mg/L	ND	**0.00021**[c]	ND	ND	ND	ND	ND	0.000038 J	ND	ND	ND	ND	ND	ND	ND	0.000034 J	ND
General Chemistry																		
Cyanide (amenable)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Phosphorus	mg/L	-	-	-	-	-	-	0.1 U	-	0.095 J	0.79	-	-	-	-	0.1 U	-	0.1 U
Field Parameters																		
Turbidity, field	NTU	26.3	5.07	4.33	2.66	4.43	9.6	10.3	> 1000	230	230	8.08	2.17	2.94	2.94	1.2	15.5	3.33

Notes
Michigan Part 201 generic clean up criteria (updated September 28, 2012)
ID - Insufficient data to develop criterion
NLV - Hazardous substance is not likely to volatilize under most conditions
NA - Criterion or value is not available

Perimeter Status (1) - N - non-perimeter, Y - perimeter
mg/L - miligram per liter
NTU - Nephelometric Turbidity Unit

Notes:
U - Not detected at the associated reporting limit.
J - Estimated concentration.
UJ - Not detected; associated reporting limit is estimated.

TABLE 3.9

PART 201 CRITERIA EXCEEDANCES - GROUNDWATER
2013 RFI REPORT
FORMER GENRERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation		*WEST02*	*WEST02*	*WEST02*	*WEST02*	*WEST02*	*WEST02*	*WEST02*	*WEST02*	*WEST02*	*WEST02*	*WEST03*	*WEST03*	*WEST03*	*WEST03*	*WEST03*	*WEST03*
Aquifer		*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Intermediate*	*Intermediate*	*Intermediate*	*Intermediate*	*Intermediate*	*Intermediate*
Perimeter Status (1)		*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*Y*	*Y*	*N*	*N*	*N*	*N*	*N*	*N*
Sample Location		*CRA-529M*	*CRA-529M*	*CRA-721M*	*CRA-721M*	*CRA-722M*	*CRA-722M*	*CRA-737M*	*CRA-737M*	*CRA-726M*	*CRA-726M*	*CRA-724I*	*CRA-724I*	*CRA-739I*	*CRA-739I*	*CRA-739I*	*CRA-787I*
Sample Identification (GW-17358-)		*041812-DR-1052*	*040113-JY-001*	*042412-DR-1087*	*041213-JY-097*	*042412-DR-1091*	*041513-DR-106*	*041712-DR-1044*	*040113-DR-007*	*042512-CB-1101*	*041013-DR-082*	*042312-CB-1085*	*041513-DR-105*	*041712-DR-1041*	*040113-CT-003*	*040113-CT-004*	*041712-DR-1042*
Sample Date		*4/18/2012*	*4/1/2013*	*4/24/2012*	*4/12/2013*	*4/24/2012*	*4/15/2013*	*4/17/2012*	*4/1/2013*	*4/25/2012*	*4/10/2013*	*4/23/2012*	*4/15/2013*	*4/17/2012*	*4/1/2013*	*4/1/2013*	*4/17/2012*
Sample Type																*Duplicate*	
Volatile Organic Compounds (VOCs)	***Units***																
1,1,1-Trichloroethane	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,1,2,2-Tetrachloroethane	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,1,2-Trichloroethane	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,1-Dichloroethane	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,1-Dichloroethene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,2,4-Trichlorobenzene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,2-Dibromo-3-chloropropane (DBCP)	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,2-Dibromoethane (Ethylene dibromide)	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,2-Dichlorobenzene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,2-Dichloroethane	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,2-Dichloropropane	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,3-Dichlorobenzene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,4-Dichlorobenzene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
2-Butanone (Methyl ethyl ketone) (MEK)	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
2-Hexanone	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Acetone	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Benzene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.00017 J	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Bromodichloromethane	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Bromoform	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Bromomethane (Methyl bromide)	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Carbon disulfide	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Carbon tetrachloride	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Chlorobenzene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Chloroethane	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Chloroform (Trichloromethane)	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0004 J	0.001 U	0.001 U	0.001 U
Chloromethane (Methyl chloride)	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
cis-1,2-Dichloroethene	mg/L	0.001 U	0.00019 J	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
cis-1,3-Dichloropropene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Cyclohexane	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Dibromochloromethane	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Dichlorodifluoromethane (CFC-12)	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Ethylbenzene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Isopropyl benzene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Methyl acetate	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Methyl cyclohexane	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Methyl tert butyl ether (MTBE)	mg/L	0.0065	0.02	0.005 U	0.001 U	0.005 U	0.001 U	0.0018 J	0.0015	0.005 U	0.001 U	0.005 U	0.001 U	0.005 U	0.001 U	0.001 U	0.005 U
Methylene chloride	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Styrene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Tetrachloroethene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Toluene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0003 J	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
trans-1,2-Dichloroethene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
trans-1,3-Dichloropropene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Trichloroethene	mg/L	0.00024 J	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Trichlorofluoromethane (CFC-11)	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Trifluorotrichloroethane (Freon 113)	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Vinyl chloride	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Xylenes (total)	mg/L	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U

TABLE 3.9

PART 201 CRITERIA EXCEEDANCES - GROUNDWATER
2013 RFI REPORT
FORMER GENRERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation		*WEST02*	*WEST02*	*WEST02*	*WEST02*	*WEST02*	*WEST02*	*WEST02*	*WEST02*	*WEST02*	*WEST02*	*WEST03*	*WEST03*	*WEST03*	*WEST03*	*WEST03*	*WEST03*
Aquifier		*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Intermediate*	*Intermediate*	*Intermediate*	*Intermediate*	*Intermediate*	*Intermediate*
Perimeter Status (1)		*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*Y*	*Y*	*N*	*N*	*N*	*N*	*N*	*N*
Sample Location		*CRA-529M*	*CRA-529M*	*CRA-721M*	*CRA-721M*	*CRA-722M*	*CRA-722M*	*CRA-737M*	*CRA-737M*	*CRA-726M*	*CRA-726M*	*CRA-724I*	*CRA-724I*	*CRA-739I*	*CRA-739I*	*CRA-739I*	*CRA-787I*
Sample Identification (GW-17358-)		*041812-DR-1052*	*040113-JY-001*	*042412-DR-1087*	*041213-JY-097*	*042412-DR-1091*	*041513-DR-106*	*041712-DR-1044*	*040113-DR-007*	*042512-CB-1101*	*041013-DR-082*	*042312-CB-1085*	*041513-DR-105*	*041712-DR-1041*	*040113-CT-003*	*040113-CT-004*	*041712-DR-1042*
Sample Date		*4/18/2012*	*4/1/2013*	*4/24/2012*	*4/12/2013*	*4/24/2012*	*4/15/2013*	*4/17/2012*	*4/1/2013*	*4/25/2012*	*4/10/2013*	*4/23/2012*	*4/15/2013*	*4/17/2012*	*4/1/2013*	*4/1/2013*	*4/17/2012*
Sample Type																*Duplicate*	
Semi-Volatile Organic Compounds (SVOCs)																	
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	mg/L	0.0051 U	0.0048 U	0.005 U	0.005 U	0.0053 U	0.0053 U	0.005 U	0.0052 U	0.0054 U	0.0053 U	0.0052 U	0.0052 U	0.0051 U	0.0048 U	0.0048 U	0.0052 U
2,4,5-Trichlorophenol	mg/L	0.0051 U	0.0048 U	0.005 U	0.005 U	0.0053 U	0.0053 U	0.005 U	0.0052 U	0.0054 U	0.0053 U	0.0052 U	0.0052 U	0.0051 U	0.0048 U	0.0048 U	0.0052 U
2,4,6-Trichlorophenol	mg/L	0.004 U	0.0038 U	0.004 U	0.004 U	0.0042 U	0.0042 U	0.004 U	0.0042 U	0.0043 U	0.0042 U	0.0042 U	0.0042 U	0.0041 U	0.0038 U	0.0038 U	0.0041 U
2,4-Dichlorophenol	mg/L	0.00081 J	0.0096 U	0.01 U	0.01 U	0.011 U	0.011 U	0.0099 U	0.01 U	0.011 U	0.011 U	0.01 U	0.01 U	0.01 U	0.0095 U	0.0095 U	0.01 U
2,4-Dimethylphenol	mg/L	0.0051 U	0.0048 U	0.005 U	0.005 U	0.0053 U	0.0053 U	0.005 U	0.0052 U	0.0054 U	0.0053 U	0.0052 U	0.0052 U	0.0051 U	0.0048 U	0.0048 U	0.0052 U
2,4-Dinitrophenol	mg/L	0.02 U	0.019 U	0.02 U	0.02 U	0.021 U	0.021 U	0.02 U	0.021 U	0.022 U	0.021 U	0.021 U	0.021 U	0.02 U	0.019 U	0.019 U	0.021 U
2,4-Dinitrotoluene	mg/L	0.0051 U	0.0048 U	0.005 U	0.005 U	0.0053 U	0.0053 U	0.005 U	0.0052 U	0.0054 U	0.0053 U	0.0052 U	0.0052 U	0.0051 U	0.0048 U	0.0048 U	0.0052 U
2,6-Dinitrotoluene	mg/L	0.0051 U	0.0048 U	0.005 U	0.005 U	0.0053 U	0.0053 U	0.005 U	0.0052 U	0.0054 U	0.0053 U	0.0052 U	0.0052 U	0.0051 U	0.0048 U	0.0048 U	0.0052 U
2-Chloronaphthalene	mg/L	0.0051 U	0.0048 U	0.005 U	0.005 U	0.0053 U	0.0053 U	0.005 U	0.0052 U	0.0054 U	0.0053 U	0.0052 U	0.0052 U	0.0051 U	0.0048 U	0.0048 U	0.0052 U
2-Chlorophenol	mg/L	0.0051 U	0.0048 U	0.005 U	0.005 U	0.0053 U	0.0053 U	0.005 U	0.0052 U	0.0054 U	0.0053 U	0.0052 U	0.0052 U	0.0051 U	0.0048 U	0.0048 U	0.0052 U
2-Methylnaphthalene	mg/L	0.0051 U	0.0048 U	0.005 U	0.005 U	0.0053 U	0.0053 U	0.005 U	0.0052 U	0.0054 U	0.0053 U	0.0052 U	0.0052 U	0.0051 U	0.0048 U	0.0048 U	0.0052 U
2-Methylphenol	mg/L	0.0051 U	0.0048 U	0.005 U	0.005 U	0.0053 U	0.0053 U	0.005 U	0.0052 U	0.0054 U	0.0053 U	0.0052 U	0.0052 U	0.0051 U	0.0048 U	0.0048 U	0.0052 U
2-Nitroaniline	mg/L	0.02 U	0.019 U	0.02 U	0.02 U	0.021 U	0.021 U	0.02 U	0.021 U	0.022 U	0.021 U	0.021 U	0.021 U	0.02 U	0.019 U	0.019 U	0.021 U
2-Nitrophenol	mg/L	0.0051 U	0.0048 U	0.005 U	0.005 U	0.0053 U	0.0053 U	0.005 U	0.0052 U	0.0054 U	0.0053 U	0.0052 U	0.0052 U	0.0051 U	0.0048 U	0.0048 U	0.0052 U
3&4-Methylphenol	mg/L	0.0051 U	0.0048 U	0.005 U	0.005 U	0.0053 U	0.0053 U	0.005 U	0.0052 U	0.0054 U	0.0053 U	0.0052 U	0.0052 U	0.0051 U	0.0048 U	0.0048 U	0.0052 U
3,3'-Dichlorobenzidine	mg/L	0.001 U	0.00096 U	0.001 U	0.001 U	0.0011 U	0.0011 U	0.00099 U	0.001 U	0.0011 U	0.0011 U	0.001 U	0.001 U	0.001 U	0.00095 U	0.00095 U	0.001 U
3-Nitroaniline	mg/L	0.02 U	0.019 U	0.02 U	0.02 U	0.021 U	0.021 U	0.02 U	0.021 U	0.022 U	0.021 U	0.021 U	0.021 U	0.02 U	0.019 U	0.019 U	0.021 U
4,6-Dinitro-2-methylphenol	mg/L	0.02 U	0.019 U	0.02 U	0.02 U	0.021 U	0.021 U	0.02 U	0.021 U	0.022 U	0.021 U	0.021 U	0.021 U	0.02 U	0.019 U	0.019 U	0.021 U
4-Bromophenyl phenyl ether	mg/L	0.0051 U	0.0048 U	0.005 U	0.005 U	0.0053 U	0.0053 U	0.005 U	0.0052 U	0.0054 U	0.0053 U	0.0052 U	0.0052 U	0.0051 U	0.0048 U	0.0048 U	0.0052 U
4-Chloro-3-methylphenol	mg/L	0.0051 U	0.0048 U	0.005 U	0.005 U	0.0053 U	0.0053 U	0.005 U	0.0052 U	0.0054 U	0.0053 U	0.0052 U	0.0052 U	0.0051 U	0.0048 U	0.0048 U	0.0052 U
4-Chloroaniline	mg/L	0.01 U	0.0096 U	0.01 U	0.01 U	0.011 U	0.011 U	0.0099 U	0.01 U	0.011 U	0.011 U	0.01 U	0.01 U	0.01 U	0.0095 U	0.0095 U	0.01 U
4-Chlorophenyl phenyl ether	mg/L	0.0051 U	0.0048 U	0.005 U	0.005 U	0.0053 U	0.0053 U	0.005 U	0.0052 U	0.0054 U	0.0053 U	0.0052 U	0.0052 U	0.0051 U	0.0048 U	0.0048 U	0.0052 U
4-Nitroaniline	mg/L	0.02 U	0.019 U	0.02 U	0.02 U	0.021 U	0.021 U	0.02 U	0.021 U	0.022 U	0.021 U	0.021 U	0.021 U	0.02 U	0.019 U	0.019 U	0.021 U
4-Nitrophenol	mg/L	0.02 U	0.019 U	0.02 U	0.02 U	0.021 U	0.021 U	0.02 U	0.021 U	0.022 U	0.021 U	0.021 U	0.021 U	0.02 U	0.019 U	0.019 U	0.021 U
Acenaphthene	mg/L	0.0051 U	0.0048 U	0.005 U	0.005 U	0.0053 U	0.0053 U	0.005 U	0.0052 U	0.0054 U	0.0053 U	0.0052 U	0.0052 U	0.0051 U	0.0048 U	0.0048 U	0.0052 U
Acenaphthylene	mg/L	0.0051 U	0.0048 U	0.005 U	0.005 U	0.0053 U	0.0053 U	0.005 U	0.0052 U	0.0054 U	0.0053 U	0.0052 U	0.0052 U	0.0051 U	0.0048 U	0.0048 U	0.0052 U
Acetophenone	mg/L	0.0051 U	0.0048 U	0.005 U	0.005 U	0.0053 U	0.0053 U	0.005 U	0.0052 U	0.0054 U	0.0053 U	0.0052 U	0.0052 U	0.0051 U	0.0048 U	0.0048 U	0.0052 U
Anthracene	mg/L	0.0051 U	0.0048 U	0.005 U	0.005 U	0.0053 U	0.0053 U	0.005 U	0.0052 U	0.0054 U	0.0053 U	0.0052 U	0.0052 U	0.0051 U	0.0048 U	0.0048 U	0.0052 U
Atrazine	mg/L	0.003 U	0.0029 U	0.003 U	0.003 U	0.0032 U	0.0032 U	0.003 U	0.0031 U	0.0032 U	0.0032 U	0.0031 U	0.0031 U	0.0031 U	0.0029 U	0.0029 U	0.0031 U
Benzaldehyde	mg/L	0.0051 U	0.0048 U	0.005 U	0.005 U	0.0053 U	0.0053 U	0.005 U	0.0052 U	0.0054 U	0.0053 U	0.0052 U	0.0052 U	0.0051 U	0.0048 U	0.0048 U	0.0052 U
Benzo(a)anthracene	mg/L	0.001 U	0.00096 U	0.001 U	0.001 U	0.0011 U	0.0011 U	0.00099 U	0.001 U	0.0011 U	0.0011 U	0.001 U	0.001 U	0.001 U	0.00095 U	0.00095 U	0.001 U
Benzo(a)pyrene	mg/L	0.001 U	0.00096 U	0.001 U	0.001 U	0.0011 U	0.0011 U	0.00099 U	0.001 U	0.0011 U	0.0011 U	0.001 U	0.001 U	0.001 U	0.00095 U	0.00095 U	0.001 U
Benzo(b)fluoranthene	mg/L	0.001 U	0.00096 U	0.001 U	0.001 U	0.0011 U	0.0011 U	0.00099 U	0.001 U	0.0011 U	0.0011 U	0.001 U	0.001 U	0.001 U	0.00095 U	0.00095 U	0.001 U
Benzo(g,h,i)perylene	mg/L	0.001 U	0.00096 U	0.001 U	0.001 U	0.0011 U	0.0011 U	0.00099 U	0.001 U	0.0011 U	0.0011 U	0.001 U	0.001 U	0.001 U	0.00095 U	0.00095 U	0.001 U
Benzo(k)fluoranthene	mg/L	0.001 U	0.00096 U	0.001 U	0.001 U	0.0011 U	0.0011 U	0.00099 U	0.001 U	0.0011 U	0.0011 U	0.001 U	0.001 U	0.001 U	0.00095 U	0.00095 U	0.001 U
Biphenyl (1,1-Biphenyl)	mg/L	0.0051 U	0.0048 U	0.005 U	0.005 U	0.0053 U	0.0053 U	0.005 U	0.0052 U	0.0054 U	0.0053 U	0.0052 U	0.0052 U	0.0051 U	0.0048 U	0.0048 U	0.0052 U
bis(2-Chloroethoxy)methane	mg/L	0.0051 U	0.0048 U	0.005 U	0.005 U	0.0053 U	0.0053 U	0.005 U	0.0052 U	0.0054 U	0.0053 U	0.0052 U	0.0052 U	0.0051 U	0.0048 U	0.0048 U	0.0052 U
bis(2-Chloroethyl)ether	mg/L	0.001 U	0.00096 U	0.001 U	0.001 U	0.0011 U	0.0011 U	0.00099 U	0.001 U	0.0011 U	0.0011 U	0.001 U	0.001 U	0.001 U	0.00095 U	0.00095 U	0.001 U
bis(2-Ethylhexyl)phthalate (DEHP)	mg/L	0.0011 J	0.0048 U	0.005 U	0.0009 J	0.0011 J	0.0053 U	0.005 U	0.0052 U	0.0054 U	0.0053 U	0.0052 U	0.0052 U	0.0051 U	0.0048 U	0.0048 U	0.0052 U
Butyl benzylphthalate (BBP)	mg/L	0.0051 U	0.0048 U	0.005 U	0.005 U	0.0053 U	0.0053 U	0.005 U	0.0052 U	0.0054 U	0.0053 U	0.0052 U	0.0052 U	0.0051 U	0.0048 U	0.0048 U	0.0052 U
Caprolactam	mg/L	0.01 U	0.0096 U	0.01 U	0.01 U	0.011 U	0.011 U	0.0099 U	0.01 U	0.011 U	0.011 U	0.01 U	0.00096 J	0.01 U	0.0095 U	0.0095 U	0.01 U
Carbazole	mg/L	0.01 U	0.0096 U	0.01 U	0.01 U	0.011 U	0.011 U	0.0099 U	0.01 U	0.011 U	0.011 U	0.01 U	0.01 U	0.01 U	0.0095 U	0.0095 U	0.01 U
Chrysene	mg/L	0.001 U	0.00096 U	0.001 U	0.001 U	0.0011 U	0.0011 U	0.00099 U	0.001 U	0.0011 U	0.0011 U	0.001 U	0.001 U	0.001 U	0.00095 U	0.00095 U	0.001 U
Dibenz(a,h)anthracene	mg/L	0.002 U	0.0019 U	0.002 U	0.002 U	0.0021 U	0.0021 U	0.002 U	0.0021 U	0.0022 U	0.0021 U	0.0021 U	0.0021 U	0.002 U	0.0019 U	0.0019 U	0.0021 U
Dibenzofuran	mg/L	0.004 U	0.0038 U	0.004 U	0.004 U	0.0042 U	0.0042 U	0.004 U	0.0042 U	0.0043 U	0.0042 U	0.0042 U	0.0042 U	0.0041 U	0.0038 U	0.0038 U	0.0041 U
Diethyl phthalate	mg/L	0.0051 U	0.0048 U	0.005 U	0.005 U	0.0053 U	0.0053 U	0.005 U	0.0052 U	0.0054 U	0.0053 U	0.0052 U	0.0052 U	0.0051 U	0.0048 U	0.0048 U	0.0052 U
Dimethyl phthalate	mg/L	0.0051 U	0.0048 U	0.005 U	0.005 U	0.0053 U	0.0053 U	0.005 U	0.0052 U	0.0054 U	0.0053 U	0.0052 U	0.0052 U	0.0051 U	0.0048 U	0.0048 U	0.0052 U
Di-n-butylphthalate (DBP)	mg/L	0.0051 U	0.0048 U	0.005 U	0.005 U	0.0053 U	0.0053 U	0.005 U	0.0052 U	0.0054 U	0.0053 U	0.0052 U	0.0052 U	0.0051 U	0.0048 U	0.0048 U	0.0052 U
Di-n-octyl phthalate (DnOP)	mg/L	0.0051 U	0.0048 U	0.005 U	0.005 U	0.0053 U	0.0053 U	0.005 U	0.0052 U	0.0054 U	0.0053 U	0.0052 U	0.0052 U	0.0051 U	0.0048 U	0.0048 U	0.0052 U
Fluoranthene	mg/L	0.001 U	0.00096 U	0.001 U	0.001 U	0.0011 U	0.0011 U	0.00099 U	0.001 U	0.0011 U	0.0011 U	0.001 U	0.001 U	0.001 U	0.00095 U	0.00095 U	0.001 U
Fluorene	mg/L	0.0003 J	0.0048 U	0.005 U	0.005 U	0.0053 U	0.0053 U	0.005 U	0.0052 U	0.0054 U	0.0053 U	0.0052 U	0.0052 U	0.0051 U	0.0048 U	0.0048 U	0.0052 U
Hexachlorobenzene	mg/L	0.0002 U	0.00019 U	0.0002 U	0.0002 U	0.00021 U	0.00021 U	0.0002 U	0.00021 U	0.00022 U	0.00021 U	0.00021 U	0.00021 U	0.0002 U	0.00019 U	0.00019 U	0.00021 U

TABLE 3.9

PART 201 CRITERIA EXCEEDANCES - GROUNDWATER
2013 RFI REPORT
FORMER GENRERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation		*WEST02*	*WEST02*	*WEST02*	*WEST02*	*WEST02*	*WEST02*	*WEST02*	*WEST02*	*WEST02*	*WEST02*	*WEST03*	*WEST03*	*WEST03*	*WEST03*	*WEST03*	*WEST03*
Aquifer		*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Intermediate*	*Intermediate*	*Intermediate*	*Intermediate*	*Intermediate*	*Intermediate*
Perimeter Status (1)		*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*Y*	*Y*	*N*	*N*	*N*	*N*	*N*	*N*
Sample Location		*CRA-529M*	*CRA-529M*	*CRA-721M*	*CRA-721M*	*CRA-722M*	*CRA-722M*	*CRA-737M*	*CRA-737M*	*CRA-726M*	*CRA-726M*	*CRA-724I*	*CRA-724I*	*CRA-739I*	*CRA-739I*	*CRA-739I*	*CRA-787I*
Sample Identification (GW-17358-)		*041812-DR-1052*	*040113-JY-001*	*042412-DR-1087*	*041213-JY-097*	*042412-DR-1091*	*041513-DR-106*	*041712-DR-1044*	*040113-DR-007*	*042512-CB-1101*	*041013-DR-082*	*042312-CB-1085*	*041513-DR-105*	*041712-DR-1041*	*040113-CT-003*	*040113-CT-004*	*041712-DR-1042*
Sample Date		*4/18/2012*	*4/1/2013*	*4/24/2012*	*4/12/2013*	*4/24/2012*	*4/15/2013*	*4/17/2012*	*4/1/2013*	*4/25/2012*	*4/10/2013*	*4/23/2012*	*4/15/2013*	*4/17/2012*	*4/1/2013*	*4/1/2013*	*4/17/2012*
Sample Type																*Duplicate*	
SVOCs Continued																	
Hexachlorobutadiene	mg/L	0.001 U	0.00096 U	0.001 U	0.001 U	0.0011 U	0.0011 U	0.00099 U	0.001 U	0.0011 U	0.0011 U	0.001 U	0.001 U	0.001 U	0.00095 U	0.00095 U	0.001 U
Hexachlorocyclopentadiene	mg/L	0.0051 U	R	0.005 U	0.005 U	0.0053 U	0.0053 U	0.005 U	R	0.0054 U	0.0053 U	0.0052 U	0.0052 U	0.0051 U	R	R	0.0052 U
Hexachloroethane	mg/L	0.0051 U	0.0048 U	0.005 U	0.005 U	0.0053 U	0.0053 U	0.005 U	0.0052 U	0.0054 U	0.0053 U	0.0052 U	0.0052 U	0.0051 U	0.0048 U	0.0048 U	0.0052 U
Indeno(1,2,3-cd)pyrene	mg/L	0.002 U	0.0019 U	0.002 U	0.002 U	0.0021 U	0.0021 U	0.002 U	0.0021 U	0.0022 U	0.0021 U	0.0021 U	0.0021 U	0.002 U	0.0019 U	0.0019 U	0.0021 U
Isophorone	mg/L	0.0051 U	0.0048 U	0.005 U	0.005 U	0.0053 U	0.0053 U	0.005 U	0.0052 U	0.0054 U	0.0053 U	0.0052 U	0.0052 U	0.0051 U	0.0048 U	0.0048 U	0.0052 U
Naphthalene	mg/L	0.0051 U	0.0048 U	0.005 U	0.005 U	0.0053 U	0.0053 U	0.005 U	0.0052 U	0.0054 U	0.0053 U	0.0052 U	0.0052 U	0.0051 U	0.0048 U	0.0048 U	0.0052 U
Nitrobenzene	mg/L	0.003 U	0.0029 U	0.003 U	0.003 U	0.0032 U	0.0032 U	0.003 U	0.0031 U	0.0032 U	0.0032 U	0.0031 U	0.0031 U	0.0031 U	0.0029 U	0.0029 U	0.0031 U
N-Nitrosodi-n-propylamine	mg/L	0.0051 U	0.0048 U	0.005 U	0.005 U	0.0053 U	0.0053 U	0.005 U	0.0052 U	0.0054 U	0.0053 U	0.0052 U	0.0052 U	0.0051 U	0.0048 U	0.0048 U	0.0052 U
N-Nitrosodiphenylamine	mg/L	0.0051 U	0.0048 U	0.005 U	0.005 U	0.0053 U	0.0053 U	0.005 U	0.0052 U	0.0054 U	0.0053 U	0.0052 U	0.0052 U	0.0051 U	0.0048 U	0.0048 U	0.0052 U
Pentachlorophenol	mg/L	0.0051 U	0.0048 U	0.005 U	0.005 U	0.0053 U	0.0053 U	0.005 U	0.0052 U	0.0054 U	0.0053 U	0.0052 U	0.0052 U	0.0051 U	0.0048 U	0.0048 U	0.0052 U
Phenanthrene	mg/L	0.00034 J	0.0019 U	0.002 U	0.002 U	0.0021 U	0.0021 U	0.002 U	0.0021 U	0.0022 U	0.0021 U	0.0021 U	0.0021 U	0.002 U	0.0019 U	0.0019 U	0.0021 U
Phenol	mg/L	0.0051 U	0.0048 U	0.005 U	0.005 U	0.0053 U	0.0053 U	0.005 U	0.0052 U	0.0054 U	0.0053 U	0.0052 U	0.0052 U	0.0051 U	0.0048 U	0.0048 U	0.0052 U
Pyrene	mg/L	0.0051 U	0.0048 U	0.005 U	0.005 U	0.0053 U	0.0053 U	0.005 U	0.0052 U	0.0054 U	0.0053 U	0.0052 U	0.0052 U	0.0051 U	0.0048 U	0.0048 U	0.0052 U
Metals																	
Aluminum	mg/L	0.05 U	0.05 U	0.032 J	**0.13 J**[b]	**1.4**[b]	0.021 J	0.05 U	0.05 U	0.05 U	0.05 U	**0.066**[b]	0.036 J	0.05	0.022 J	0.028 J	0.05 U
Aluminum (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Antimony	mg/L	0.00018 J	0.002 U	0.00073 J	0.002 U	0.0005 J	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.00062 J	0.002 U	0.002 U	0.002 U
Antimony (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Arsenic	mg/L	**0.056**[bc]	**0.048**[bc]	0.0008 J	0.005 U	0.0013 J	0.00035 J	0.0021 J	0.0014 J	0.00063 J	0.005 U	0.0045 J	0.0057	0.0016 J	0.0047 J	0.0045 J	0.0097
Arsenic (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Barium	mg/L	0.6	0.61	0.09 J	0.28	0.26	0.26	0.28	0.13	0.015 J	0.016 J	0.39	0.066 J	0.24	0.16	0.16	0.19
Barium (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Beryllium	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Beryllium (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cadmium	mg/L	0.001 U	0.001 U	0.001 U	0.000057 J	0.001 U	0.000042 J	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Cadmium (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Calcium	mg/L	-	-	-	-	-	-	-	-	-	-	370	-	-	-	-	-
Chromium	mg/L	0.01 U	0.0015 J	0.01 U	0.0021 J	0.0041 J	0.0033 J	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Chromium (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chromium III (trivalent)	mg/L	-	-	-	-	0.01 U	-	0.01 U	-	0.01 U	-	0.01 U	-	-	-	-	-
Chromium VI (hexavalent)	mg/L	-	-	-	-	0.0024 J	-	0.01 U	-	0.01 UJ	-	0.01 U	-	-	-	-	-
Cobalt	mg/L	0.00057 J	0.00052 J	0.00082 J	0.0003 J	0.0013 J	0.000078 J	0.0018 J	0.0018 J	0.02 U	0.00008 J	0.00032 J	0.000051 J	0.0013 J	0.00031 J	0.00038 J	0.00075 J
Cobalt (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Copper	mg/L	0.0012 J	0.004 U	0.004 U	0.004 U	0.0043 U	0.004 U	0.004 U	0.00088 J	0.004 U	0.004 U	0.004 U	0.004 U	0.0056	0.004 U	0.00085 J	0.004 U
Copper (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Iron	mg/L	**22**[b]	**20**[b]	0.2	0.2 U	**1.9**[b]	0.2 U	**20**[b]	**0.98**[b]	0.2 U	0.2 U	**5**[b]	**0.46**[b]	0.15 J	**3.1**[b]	**2.7**[b]	**1.7**[b]
Iron (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lead	mg/L	0.00066 J	0.003 U	0.003 U	0.00022 J	**0.0041**[b]	0.00037 J	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.00032 J	0.00071 J	0.003 U	0.00046 J	0.00098 J
Lead (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Magnesium	mg/L	-	-	-	-	-	-	-	-	-	-	56	-	-	-	-	-
Manganese	mg/L	**0.29**[b]	**0.28**[b]	**0.17**[b]	**0.074**[b]	**0.13**[b]	0.0056 J	**0.56**[b]	**0.33**[b]	0.0068 J	0.05 U	**0.91**[b]	**0.084**[b]	**0.2**[b]	**0.059**[b]	**0.066**[b]	**0.076**[b]
Manganese (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mercury	mg/L	0.04 U	0.0002 U	0.04 U	0.0002 U	0.04 U	0.0002 U	0.04 U	0.0002 U	0.04 U	0.0002 U	0.04 U	0.0002 U	0.04 U	0.0002 U	0.0002 U	0.04 U
Mercury (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nickel	mg/L	0.0044 J	0.0032 J	0.0016 J	0.0022 J	0.0037 J	0.0011 J	0.0032 J	0.0053 J	0.02 U	0.02 U	0.0014 J	0.02 U	0.03	0.055	0.052	0.0076 J
Nickel (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Potassium	mg/L	-	-	-	-	-	-	-	-	-	-	11	-	-	-	-	-
Selenium	mg/L	0.005 U	0.005 U	0.0014 J	0.00079 J	0.00071 J	0.00074 J	0.005 U	0.005 U	0.005 U	0.00062 J	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Selenium (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Silver	mg/L	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.000023 J	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Silver (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sodium	mg/L	-	-	-	-	-	-	-	-	-	-	**2200**[b]	-	-	-	-	-

TABLE 3.9

PART 201 CRITERIA EXCEEDANCES - GROUNDWATER
2013 RFI REPORT
FORMER GENRERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation		*WEST02*	*WEST02*	*WEST02*	*WEST02*	*WEST02*	*WEST02*	*WEST02*	*WEST02*	*WEST02*	*WEST02*	*WEST03*	*WEST03*	*WEST03*	*WEST03*	*WEST03*	*WEST03*
Aquifer		*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Intermediate*	*Intermediate*	*Intermediate*	*Intermediate*	*Intermediate*	*Intermediate*
Perimeter Status (1)		*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*Y*	*Y*	*N*	*N*	*N*	*N*	*N*	*N*
Sample Location		*CRA-529M*	*CRA-529M*	*CRA-721M*	*CRA-721M*	*CRA-722M*	*CRA-722M*	*CRA-737M*	*CRA-737M*	*CRA-726M*	*CRA-726M*	*CRA-724I*	*CRA-724I*	*CRA-739I*	*CRA-739I*	*CRA-739I*	*CRA-787I*
Sample Identification (GW-17358-)		*041812-DR-1052*	*040113-JY-001*	*042412-DR-1087*	*041213-JY-097*	*042412-DR-1091*	*041513-DR-106*	*041712-DR-1044*	*040113-DR-007*	*042512-CB-1101*	*041013-DR-082*	*042312-CB-1085*	*041513-DR-105*	*041712-DR-1041*	*040113-CT-003*	*040113-CT-004*	*041712-DR-1042*
Sample Date		*4/18/2012*	*4/1/2013*	*4/24/2012*	*4/12/2013*	*4/24/2012*	*4/15/2013*	*4/17/2012*	*4/1/2013*	*4/25/2012*	*4/10/2013*	*4/23/2012*	*4/15/2013*	*4/17/2012*	*4/1/2013*	*4/1/2013*	*4/17/2012*
Sample Type																*Duplicate*	
Metals Continued																	
Thallium	mg/L	0.002 U	0.00029 J	0.00043 J	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.00046 J	0.00015 J	0.002 U	0.002 U	0.00014 J	0.0002 J	0.002 U
Thallium (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Vanadium	mg/L	0.004 U	0.004 U	0.004 U	0.00016 J	0.0034 J	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.0011 J	0.004 U	0.004 U	0.004 U
Vanadium (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Zinc	mg/L	0.0061 J	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Zinc (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Polychlorinated Biphenyls (PCBs)																	
Aroclor-1016 (PCB-1016)	mg/L	0.0001 U	0.000095 UJ	0.0001 U	0.00011 U	0.0001 U	0.0001 U	0.0001 U	0.000098 U	0.00012 U	0.0001 U	0.00011 U	0.000099 U	0.0001 U	0.000098 U	0.0001 U	0.00011 U
Aroclor-1221 (PCB-1221)	mg/L	0.0001 U	0.000095 UJ	0.0001 U	0.00011 U	0.0001 U	0.0001 U	0.0001 U	0.000098 U	0.00012 U	0.0001 U	0.00011 U	0.000099 U	0.0001 U	0.000098 U	0.0001 U	0.00011 U
Aroclor-1232 (PCB-1232)	mg/L	0.0001 U	0.000095 UJ	0.0001 U	0.00011 U	0.0001 U	0.0001 U	0.0001 U	0.000098 U	0.00012 U	0.0001 U	0.00011 U	0.000099 U	0.0001 U	0.000098 U	0.0001 U	0.00011 U
Aroclor-1242 (PCB-1242)	mg/L	0.0001 U	0.000095 UJ	0.0001 U	0.00011 U	0.0001 U	0.0001 U	0.0001 U	0.000098 U	0.00012 U	0.0001 U	0.00011 U	0.000099 U	0.0001 U	0.000098 U	0.0001 U	0.00011 U
Aroclor-1248 (PCB-1248)	mg/L	0.0001 U	0.000095 UJ	0.0001 U	0.00011 U	0.0001 U	0.0001 U	0.0001 U	0.000098 U	0.00012 U	0.0001 U	0.00011 U	0.000099 U	0.0001 U	0.000098 U	0.0001 U	0.00011 U
Aroclor-1254 (PCB-1254)	mg/L	0.0001 U	0.000095 UJ	0.0001 U	0.00011 U	0.0001 U	0.0001 U	0.0001 U	0.000098 U	0.00011 J	0.0001 U	0.00011 U	0.000099 U	0.0001 U	0.000098 U	0.0001 U	0.00011 U
Aroclor-1260 (PCB-1260)	mg/L	0.0001 U	0.000095 UJ	0.0001 U	0.00011 U	0.0001 U	0.0001 U	0.0001 U	0.000098 U	0.00012 U	0.0001 U	0.00011 U	0.000099 U	0.0001 U	0.000098 U	0.0001 U	0.00011 U
Aroclor-1262 (PCB-1262)	mg/L	0.0001 U	0.000095 UJ	-	0.00011 U	-	0.0001 U	0.0001 U	0.000098 U	0.00012 U	0.0001 U	0.00011 U	0.000099 U	0.0001 U	0.000098 U	0.0001 U	0.00011 U
Aroclor-1268 (PCB-1268)	mg/L	0.0001 U	0.000095 UJ	-	0.00011 U	-	0.0001 U	0.0001 U	0.000098 U	0.00012 U	0.0001 U	0.00011 U	0.000099 U	0.0001 U	0.000098 U	0.0001 U	0.00011 U
Total PCBs	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	0.00011 J	ND	ND	ND	ND	ND	ND	ND
General Chemistry																	
Cyanide (amenable)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Phosphorus	mg/L	-	0.11	-	-	-	0.037 J	-	-	-	0.1 U	-	-	-	0.1 U	0.1 U	-
Field Parameters																	
Turbidity, field	NTU	2.86	1.37	1.83	dry	4.39	1.81	1.18	6.67	2.66	4.2	4.66	1.96	3.7	3.65	3.65	1.24

Notes
Michigan Part 201 generic clean up criteria (updated September 28, 2012)
ID - Insufficient data to develop criterion
NLV - Hazardous substance is not likely to volatilize under most conditions
NA - Criterion or value is not available

Perimeter Status (1) - N - non-perimeter, Y - perimeter
mg/L - miligram per liter
NTU - Nephelometric Turbidity Unit

Notes:
U - Not detected at the associated reporting limit.
J - Estimated concentration.
UJ - Not detected; associated reporting limit is estimated.

TABLE 3.9

PART 201 CRITERIA EXCEEDANCES - GROUNDWATER
2013 RFI REPORT
FORMER GENRERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation		*WEST03*	*WEST03*	*WEST03*	*WEST03*	*WEST03*	*WEST03*	*WEST03*	*WEST03*	*WEST03*	*WEST03*	*WEST03*	*WEST03*	*WEST04*	*WEST04*
Aquifier		*Intermediate*	*Intermediate*	*Intermediate*	*Intermediate*	*Intermediate*	*Intermediate*	*Intermediate*	*Intermediate*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Deep*	*Deep*
Perimeter Status (1)		*N*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*N*	*N*	*Y*	*Y*	*Y*	*Y*
Sample Location		*CRA-787I*	*CRA-725I*	*CRA-725I*	*CRA-725I*	*CRA-725I*	*CRA-742I*	*CRA-742I*	*CRA-742I*	*CRA-307M*	*CRA-307M*	*CRA-725M*	*CRA-725M*	*CRA-742D*	*CRA-742D*
Sample Identification (GW-17358-)		*040113-CT-005*	*042412-DR-1088*	*042412-DR-1089*	*041513-DR-103*	*041513-DR-104*	*042312-DR-1081*	*042312-DR-1082*	*041013-DR-072*	*041312-DR-1009*	*040913-JY-070*	*042412-DR-1090*	*041513-DR-107*	*042312-DR-1083*	*041013-DR-071*
Sample Date		*4/1/2013*	*4/24/2012*	*4/24/2012*	*4/15/2013*	*4/15/2013*	*4/23/2012*	*4/23/2012*	*4/10/2013*	*4/13/2012*	*4/9/2013*	*4/24/2012*	*4/15/2013*	*4/23/2012*	*4/10/2013*
Sample Type				*Duplicate*		*Duplicate*		*Duplicate*							
Volatile Organic Compounds (VOCs)	***Units***														
1,1,1-Trichloroethane	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,1,2,2-Tetrachloroethane	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,1,2-Trichloroethane	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,1-Dichloroethane	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,1-Dichloroethene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,2,4-Trichlorobenzene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,2-Dibromo-3-chloropropane (DBCP)	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,2-Dibromoethane (Ethylene dibromide)	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,2-Dichlorobenzene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,2-Dichloroethane	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,2-Dichloropropane	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,3-Dichlorobenzene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,4-Dichlorobenzene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
2-Butanone (Methyl ethyl ketone) (MEK)	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
2-Hexanone	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Acetone	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.0014 J	0.0013 J	0.01 U
Benzene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Bromodichloromethane	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Bromoform	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Bromomethane (Methyl bromide)	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Carbon disulfide	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.00015 J
Carbon tetrachloride	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Chlorobenzene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Chloroethane	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Chloroform (Trichloromethane)	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Chloromethane (Methyl chloride)	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
cis-1,2-Dichloroethene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
cis-1,3-Dichloropropene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Cyclohexane	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.00014 J	0.001 U
Dibromochloromethane	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Dichlorodifluoromethane (CFC-12)	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Ethylbenzene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Isopropyl benzene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Methyl acetate	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Methyl cyclohexane	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.00015 J	0.001 U
Methyl tert butyl ether (MTBE)	mg/L	0.001 U	0.005 U	0.005 U	0.001 U	0.001 U	0.005 U	0.005 U	0.001 U	0.005 U	0.001 U	0.005 U	0.001 U	0.005 U	0.001 U
Methylene chloride	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Styrene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Tetrachloroethene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Toluene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.00015 J	0.001 U
trans-1,2-Dichloroethene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
trans-1,3-Dichloropropene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Trichloroethene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.00026 J	0.001 U	0.001 U	0.001 U	0.001 U
Trichlorofluoromethane (CFC-11)	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Trifluorotrichloroethane (Freon 113)	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Vinyl chloride	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Xylenes (total)	mg/L	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U

TABLE 3.9

PART 201 CRITERIA EXCEEDANCES - GROUNDWATER
2013 RFI REPORT
FORMER GENRERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation		*WEST03*	*WEST03*	*WEST03*	*WEST03*	*WEST03*	*WEST03*	*WEST03*	*WEST03*	*WEST03*	*WEST03*	*WEST03*	*WEST04*	*WEST04*
Aquifer		*Intermediate*	*Intermediate*	*Intermediate*	*Intermediate*	*Intermediate*	*Intermediate*	*Intermediate*	*Intermediate*	*Shallow*	*Shallow*	*Shallow*	*Deep*	*Deep*
Perimeter Status (1)		*N*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*N*	*N*	*Y*	*Y*	*Y*
Sample Location		*CRA-787I*	*CRA-725I*	*CRA-725I*	*CRA-725I*	*CRA-725I*	*CRA-742I*	*CRA-742I*	*CRA-742I*	*CRA-307M*	*CRA-307M*	*CRA-725M*	*CRA-742D*	*CRA-742D*
Sample Identification (GW-17358-)		*040113-CT-005*	*042412-DR-1088*	*042412-DR-1089*	*041513-DR-103*	*041513-DR-104*	*042312-DR-1081*	*042312-DR-1082*	*041013-DR-072*	*041312-DR-1009*	*040913-JY-070*	*042412-DR-1090*	*042312-DR-1083*	*041013-DR-071*
Sample Date		*4/1/2013*	*4/24/2012*	*4/24/2012*	*4/15/2013*	*4/15/2013*	*4/23/2012*	*4/23/2012*	*4/10/2013*	*4/13/2012*	*4/9/2013*	*4/24/2012*	*4/23/2012*	*4/10/2013*
Sample Type				*Duplicate*		*Duplicate*		*Duplicate*						
Semi-Volatile Organic Compounds (SVOCs)														
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	mg/L	0.0049 U	0.005 U	0.005 U	0.0048 U	0.0051 U	0.0048 U	0.0048 U	0.0053 U	0.0051 U	0.0053 U	0.005 U	0.0053 U	0.005 U	0.005 U
2,4,5-Trichlorophenol	mg/L	0.0049 U	0.005 U	0.005 U	0.0048 U	0.0051 U	0.0048 U	0.0048 U	0.0053 U	0.0051 U	0.0053 U	0.005 U	0.0053 U	0.005 U	0.005 U
2,4,6-Trichlorophenol	mg/L	0.0039 U	0.004 U	0.004 U	0.0038 U	0.004 U	0.0038 U	0.0038 U	0.0042 U	0.004 U	0.0042 U	0.004 U	0.0042 U	0.004 U	0.004 U
2,4-Dichlorophenol	mg/L	0.0097 U	0.0099 U	0.01 U	0.0096 U	0.01 U	0.0095 U	0.0095 U	0.011 U	0.01 U	0.011 U	0.01 U	0.011 U	0.01 U	0.01 U
2,4-Dimethylphenol	mg/L	0.0049 U	0.005 U	0.005 U	0.0048 U	0.0051 U	0.0048 U	0.0048 U	0.0053 U	0.0051 U	0.0053 U	0.005 U	0.0053 U	0.005 U	0.005 U
2,4-Dinitrophenol	mg/L	0.019 U	0.02 U	0.02 U	0.019 U	0.02 U	0.019 U	0.019 U	0.021 U	0.02 U	0.021 U	0.02 U	0.021 U	0.02 U	0.02 U
2,4-Dinitrotoluene	mg/L	0.0049 U	0.005 U	0.005 U	0.0048 U	0.0051 U	0.0048 U	0.0048 U	0.0053 U	0.0051 U	0.0053 U	0.005 U	0.0053 U	0.005 U	0.005 U
2,6-Dinitrotoluene	mg/L	0.0049 U	0.005 U	0.005 U	0.0048 U	0.0051 U	0.0048 U	0.0048 U	0.0053 U	0.0051 U	0.0053 U	0.005 U	0.0053 U	0.005 U	0.005 U
2-Chloronaphthalene	mg/L	0.0049 U	0.005 U	0.005 U	0.0048 U	0.0051 U	0.0048 U	0.0048 U	0.0053 U	0.0051 U	0.0053 U	0.005 U	0.0053 U	0.005 U	0.005 U
2-Chlorophenol	mg/L	0.0049 U	0.005 U	0.005 U	0.0048 U	0.0051 U	0.0048 U	0.0048 U	0.0053 U	0.0051 U	0.0053 U	0.005 U	0.0053 U	0.005 U	0.005 U
2-Methylnaphthalene	mg/L	0.0049 U	0.005 U	0.005 U	0.0048 U	0.0051 U	0.0048 U	0.0048 U	0.0053 U	0.0051 U	0.0053 U	0.005 U	0.0053 U	0.005 U	0.005 U
2-Methylphenol	mg/L	0.0049 U	0.005 U	0.005 U	0.0048 U	0.0051 U	0.0048 U	0.0048 U	0.0053 U	0.0051 U	0.0053 U	0.005 U	0.0053 U	0.005 U	0.005 U
2-Nitroaniline	mg/L	0.019 U	0.02 U	0.02 U	0.019 U	0.02 U	0.019 U	0.019 U	0.021 U	0.02 U	0.021 U	0.02 U	0.021 U	0.02 U	0.02 U
2-Nitrophenol	mg/L	0.0049 U	0.005 U	0.005 U	0.0048 U	0.0051 U	0.0048 U	0.0048 U	0.0053 U	0.0051 U	0.0053 U	0.005 U	0.0053 U	0.005 U	0.005 U
3&4-Methylphenol	mg/L	0.0049 U	0.005 U	0.005 U	0.0048 U	0.0051 U	0.0048 U	0.0048 U	0.0053 U	0.0051 U	0.0053 U	0.005 U	0.0053 U	0.005 U	0.005 U
3,3'-Dichlorobenzidine	mg/L	0.00097 U	0.00099 U	0.001 U	0.00096 U	0.001 U	0.00095 U	0.00095 U	0.0011 U	0.001 U	0.0011 U	0.001 U	0.0011 U	0.001 U	0.001 U
3-Nitroaniline	mg/L	0.019 U	0.02 U	0.02 U	0.019 U	0.02 U	0.019 U	0.019 U	0.021 U	0.02 U	0.021 U	0.02 U	0.021 U	0.02 U	0.02 U
4,6-Dinitro-2-methylphenol	mg/L	0.019 U	0.02 U	0.02 U	0.019 U	0.02 U	0.019 U	0.019 U	0.021 U	0.02 U	0.021 U	0.02 U	0.021 U	0.02 U	0.02 U
4-Bromophenyl phenyl ether	mg/L	0.0049 U	0.005 U	0.005 U	0.0048 U	0.0051 U	0.0048 U	0.0048 U	0.0053 U	0.0051 U	0.0053 U	0.005 U	0.0053 U	0.005 U	0.005 U
4-Chloro-3-methylphenol	mg/L	0.0049 U	0.005 U	0.005 U	0.0048 U	0.0051 U	0.0048 U	0.0048 U	0.0053 U	0.0051 U	0.0053 U	0.005 U	0.0053 U	0.005 U	0.005 U
4-Chloroaniline	mg/L	0.0097 U	0.0099 U	0.01 U	0.0096 U	0.01 U	0.0095 U	0.0095 U	0.011 U	0.01 U	0.011 U	0.01 U	0.011 U	0.01 U	0.01 U
4-Chlorophenyl phenyl ether	mg/L	0.0049 U	0.005 U	0.005 U	0.0048 U	0.0051 U	0.0048 U	0.0048 U	0.0053 U	0.0051 U	0.0053 U	0.005 U	0.0053 U	0.005 U	0.005 U
4-Nitroaniline	mg/L	0.019 U	0.02 U	0.02 U	0.019 U	0.02 U	0.019 U	0.019 U	0.021 U	0.02 U	0.021 U	0.02 U	0.021 U	0.02 U	0.02 U
4-Nitrophenol	mg/L	0.019 U	0.02 U	0.02 U	0.019 U	0.02 U	0.019 U	0.019 U	0.021 U	0.02 U	0.021 U	0.02 U	0.021 U	0.02 U	0.02 U
Acenaphthene	mg/L	0.0049 U	0.005 U	0.005 U	0.0048 U	0.0051 U	0.0048 U	0.0048 U	0.0053 U	0.0051 U	0.0053 U	0.005 U	0.0053 U	0.005 U	0.005 U
Acenaphthylene	mg/L	0.0049 U	0.005 U	0.005 U	0.0048 U	0.0051 U	0.0048 U	0.0048 U	0.0053 U	0.0051 U	0.0053 U	0.005 U	0.0053 U	0.005 U	0.005 U
Acetophenone	mg/L	0.0049 U	0.005 U	0.005 U	0.0048 U	0.0051 U	0.0048 U	0.0048 U	0.0053 U	0.0051 U	0.0053 U	0.005 U	0.0053 U	0.005 U	0.005 U
Anthracene	mg/L	0.0049 U	0.005 U	0.005 U	0.0048 U	0.0051 U	0.00017 J	0.0002 J	0.0053 U	0.0051 U	0.0053 U	0.005 U	0.0053 U	0.005 U	0.005 U
Atrazine	mg/L	0.0029 U	0.003 U	0.003 U	0.0029 U	0.003 U	0.0029 U	0.0029 U	0.0032 U	0.003 U	0.0032 U	0.003 U	0.0032 U	0.003 U	0.003 U
Benzaldehyde	mg/L	0.0049 U	0.005 U	0.005 U	0.0048 U	0.0051 U	0.0048 U	0.0048 U	0.0053 U	0.0051 U	0.0053 U	0.005 U	0.0053 U	0.005 U	0.005 U
Benzo(a)anthracene	mg/L	0.00097 U	0.00099 U	0.001 U	0.00096 U	0.001 U	0.00095 U	0.00095 U	0.0011 U	0.001 U	0.0011 U	0.001 U	0.0011 U	0.001 U	0.001 U
Benzo(a)pyrene	mg/L	0.00097 U	0.00099 U	0.001 U	0.00096 U	0.001 U	0.00095 U	0.00095 U	0.0011 U	0.001 U	0.0011 U	0.001 U	0.0011 U	0.001 U	0.001 U
Benzo(b)fluoranthene	mg/L	0.00097 U	0.00099 U	0.001 U	0.00096 U	0.001 U	0.00095 U	0.00095 U	0.0011 U	0.001 U	0.0011 U	0.001 U	0.0011 U	0.001 U	0.001 U
Benzo(g,h,i)perylene	mg/L	0.00097 U	0.00099 U	0.001 U	0.00096 U	0.001 U	0.00095 U	0.00095 U	0.0011 U	0.001 U	0.0011 U	0.001 U	0.0011 U	0.001 U	0.001 U
Benzo(k)fluoranthene	mg/L	0.00097 U	0.00099 U	0.001 U	0.00096 U	0.001 U	0.00095 U	0.00095 U	0.0011 U	0.001 U	0.0011 U	0.001 U	0.0011 U	0.001 U	0.001 U
Biphenyl (1,1-Biphenyl)	mg/L	0.0049 U	0.005 U	0.005 U	0.0048 U	0.0051 U	0.0048 U	0.0048 U	0.0053 U	0.0051 U	0.0053 U	0.005 U	0.0053 U	0.005 U	0.005 U
bis(2-Chloroethoxy)methane	mg/L	0.0049 U	0.005 U	0.005 U	0.0048 U	0.0051 U	0.0048 U	0.0048 U	0.0053 U	0.0051 U	0.0053 U	0.005 U	0.0053 U	0.005 U	0.005 U
bis(2-Chloroethyl)ether	mg/L	0.00097 U	0.00099 U	0.001 U	0.00096 U	0.001 U	0.00095 U	0.00095 U	0.0011 U	0.001 U	0.0011 U	0.001 U	0.0011 U	0.001 U	0.001 U
bis(2-Ethylhexyl)phthalate (DEHP)	mg/L	0.0049 U	0.005 U	0.005 U	0.0048 U	0.0051 U	0.00098 J	0.0048 U	0.0053 U	0.0051 U	0.0053 U	0.00091 J	0.0053 U	0.005 U	0.005 U
Butyl benzylphthalate (BBP)	mg/L	0.0049 U	0.005 U	0.005 U	0.0048 U	0.0051 U	0.0048 U	0.0048 U	0.0053 U	0.0051 U	0.0053 U	0.005 U	0.0053 U	0.005 U	0.005 U
Caprolactam	mg/L	0.0097 U	0.0099 U	0.01 U	0.0096 U	0.01 U	0.0095 U	0.0095 U	0.011 U	0.01 U	0.011 U	0.01 U	0.011 U	0.01 U	0.01 U
Carbazole	mg/L	0.0097 U	0.0099 U	0.01 U	0.0096 U	0.01 U	0.0095 U	0.0095 U	0.011 U	0.01 U	0.011 U	0.01 U	0.011 U	0.01 U	0.01 U
Chrysene	mg/L	0.00097 U	0.00099 U	0.001 U	0.00096 U	0.001 U	0.00095 U	0.00095 U	0.0011 U	0.001 U	0.0011 U	0.001 U	0.0011 U	0.001 U	0.001 U
Dibenz(a,h)anthracene	mg/L	0.0019 U	0.002 U	0.002 U	0.0019 U	0.002 U	0.0019 U	0.0019 U	0.0021 U	0.002 U	0.0021 U	0.002 U	0.0021 U	0.002 U	0.002 U
Dibenzofuran	mg/L	0.0039 U	0.004 U	0.004 U	0.0038 U	0.004 U	0.0038 U	0.0038 U	0.0042 U	0.004 U	0.0042 U	0.004 U	0.0042 U	0.004 U	0.004 U
Diethyl phthalate	mg/L	0.0049 U	0.005 U	0.005 U	0.0048 U	0.0051 U	0.0048 U	0.0048 U	0.0053 U	0.0051 U	0.0053 U	0.005 U	0.0053 U	0.005 U	0.005 U
Dimethyl phthalate	mg/L	0.0049 U	0.005 U	0.005 U	0.0048 U	0.0051 U	0.0048 U	0.0048 U	0.0053 U	0.0051 U	0.0053 U	0.005 U	0.0053 U	0.005 U	0.005 U
Di-n-butylphthalate (DBP)	mg/L	0.0049 U	0.005 U	0.005 U	0.0048 U	0.0051 U	0.0048 U	0.0048 U	0.0053 U	0.0051 U	0.0053 U	0.005 U	0.0053 U	0.005 U	0.005 U
Di-n-octyl phthalate (DnOP)	mg/L	0.0049 U	0.005 U	0.005 U	0.0048 U	0.0051 U	0.0048 U	0.0048 U	0.0053 U	0.0051 U	0.0053 U	0.005 U	0.0053 U	0.005 U	0.005 U
Fluoranthene	mg/L	0.00097 U	0.00099 U	0.001 U	0.00096 U	0.001 U	0.00095 U	0.00095 U	0.0011 U	0.001 U	0.0011 U	0.001 U	0.0011 U	0.001 U	0.001 U
Fluorene	mg/L	0.0049 U	0.005 U	0.005 U	0.0048 U	0.0051 U	0.0048 U	0.0048 U	0.0053 U	0.0051 U	0.0053 U	0.005 U	0.0053 U	0.005 U	0.005 U
Hexachlorobenzene	mg/L	0.00019 U	0.0002 U	0.0002 U	0.00019 U	0.0002 U	0.00019 U	0.00019 U	0.00021 U	0.0002 U	0.00021 U	0.0002 U	0.00021 U	0.0002 U	0.0002 U

TABLE 3.9

PART 201 CRITERIA EXCEEDANCES - GROUNDWATER
2013 RFI REPORT
FORMER GENRERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation		*WEST03*	*WEST03*	*WEST03*	*WEST03*	*WEST03*	*WEST03*	*WEST03*	*WEST03*	*WEST03*	*WEST03*	*WEST03*	*WEST04*	*WEST04*
Aquifer		*Intermediate*	*Intermediate*	*Intermediate*	*Intermediate*	*Intermediate*	*Intermediate*	*Intermediate*	*Intermediate*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Deep*	*Deep*
Perimeter Status (1)		*N*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*N*	*N*	*Y*	*Y*	*Y*	*Y*	*Y*
Sample Location		*CRA-787I*	*CRA-725I*	*CRA-725I*	*CRA-725I*	*CRA-725I*	*CRA-742I*	*CRA-742I*	*CRA-742I*	*CRA-307M*	*CRA-307M*	*CRA-725M*	*CRA-725M*	*CRA-742D*	*CRA-742D*
Sample Identification (GW-17358-)		*040113-CT-005*	*042412-DR-1088*	*042412-DR-1089*	*041513-DR-103*	*041513-DR-104*	*042312-DR-1081*	*042312-DR-1082*	*041013-DR-072*	*041312-DR-1009*	*040913-JY-070*	*042412-DR-1090*	*041513-DR-107*	*042312-DR-1083*	*041013-DR-071*
Sample Date		*4/1/2013*	*4/24/2012*	*4/24/2012*	*4/15/2013*	*4/15/2013*	*4/23/2012*	*4/23/2012*	*4/10/2013*	*4/13/2012*	*4/9/2013*	*4/24/2012*	*4/15/2013*	*4/23/2012*	*4/10/2013*
Sample Type				*Duplicate*		*Duplicate*		*Duplicate*							
SVOCs Continued															
Hexachlorobutadiene	mg/L	0.00097 U	0.00099 U	0.001 U	0.00096 U	0.001 U	0.00095 U	0.00095 U	0.0011 U	0.001 U	0.0011 U	0.001 U	0.0011 U	0.001 U	0.001 U
Hexachlorocyclopentadiene	mg/L	R	0.005 U	0.005 U	0.0048 U	0.0051 U	0.0048 U	0.0048 U	0.0053 U	0.0051 U	R	0.005 U	0.0053 U	0.005 U	0.005 U
Hexachloroethane	mg/L	0.0049 U	0.005 U	0.005 U	0.0048 U	0.0051 U	0.0048 U	0.0048 U	0.0053 U	0.0051 U	0.0053 U	0.005 U	0.0053 U	0.005 U	0.005 U
Indeno(1,2,3-cd)pyrene	mg/L	0.0019 U	0.002 U	0.002 U	0.0019 U	0.002 U	0.0019 U	0.0019 U	0.0021 U	0.002 U	0.0021 U	0.002 U	0.0021 U	0.002 U	0.002 U
Isophorone	mg/L	0.0049 U	0.005 U	0.005 U	0.0048 U	0.0051 U	0.0048 U	0.0048 U	0.0053 U	0.0051 U	0.0053 U	0.005 U	0.0053 U	0.005 U	0.005 U
Naphthalene	mg/L	0.0049 U	0.005 U	0.005 U	0.0048 U	0.0051 U	0.0048 U	0.0048 U	0.0053 U	0.0051 U	0.0053 U	0.005 U	0.0053 U	0.005 U	0.005 U
Nitrobenzene	mg/L	0.0029 U	0.003 U	0.003 U	0.0029 U	0.003 U	0.0029 U	0.0029 U	0.0032 U	0.003 U	0.0032 U	0.003 U	0.0032 U	0.003 U	0.003 U
N-Nitrosodi-n-propylamine	mg/L	0.0049 U	0.005 U	0.005 U	0.0048 U	0.0051 U	0.0048 U	0.0048 U	0.0053 U	0.0051 U	0.0053 U	0.005 U	0.0053 U	0.005 U	0.005 U
N-Nitrosodiphenylamine	mg/L	0.0049 U	0.005 U	0.005 U	0.0048 U	0.0051 U	0.0048 U	0.0048 U	0.0053 U	0.0051 U	0.0053 U	0.005 U	0.0053 U	0.005 U	0.005 U
Pentachlorophenol	mg/L	0.0049 U	0.005 U	0.005 U	0.0048 U	0.0051 U	0.0048 U	0.0048 U	0.0053 U	0.0051 U	0.0053 U	0.005 U	0.0053 U	0.005 U	0.005 U
Phenanthrene	mg/L	0.0019 U	0.002 U	0.002 U	0.0019 U	0.002 U	0.0019 U	0.0019 U	0.0021 U	0.002 U	0.0021 U	0.002 U	0.0021 U	0.002 U	0.002 U
Phenol	mg/L	0.0049 U	0.005 U	0.005 U	0.0048 U	0.0051 U	0.0048 U	0.0048 U	0.0053 U	0.0051 U	0.0053 U	0.005 U	0.0053 U	0.005 U	0.005 U
Pyrene	mg/L	0.0049 U	0.005 U	0.005 U	0.0048 U	0.0051 U	0.0048 U	0.0048 U	0.0053 U	0.0051 U	0.0053 U	0.005 U	0.0053 U	0.005 U	0.005 U
Metals															
Aluminum	mg/L	0.05 U	0.023 J	0.023 J	0.0099 J	0.011 J	0.025 J	0.03 J	0.05 U	0.05 U	**0.15[b]**	**0.085[ab]**	**0.11 J[ab]**	**270[ab]**	**4.7[ab]**
Aluminum (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Antimony	mg/L	0.002 U	0.0002 J	0.00021 J	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.00014 J	0.002 U	0.00015 J	0.002 U	0.0023	0.002 U
Antimony (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Arsenic	mg/L	**0.017[bc]**	0.00095 J	0.00068 J	0.00036 J	0.00042 J	0.0043 J	0.0042 J	0.0015 J	0.00078 J	0.005 U	0.00058 J	0.00062 J	**0.23[abc]**	0.005
Arsenic (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Barium	mg/L	0.18	0.17	0.16	0.16	0.17	0.14	0.14	0.15	0.052 J	0.09 J	0.02 J	0.024 J	**2.1[abc]**	0.083 J
Barium (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Beryllium	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	**0.019[ab]**	0.00023 J
Beryllium (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cadmium	mg/L	0.001 U	0.001 U	0.001 U	0.00012 J	0.00011 J	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0001 J	**0.0091[abc]**	0.001 U
Cadmium (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Calcium	mg/L	-	-	-	-	-	170	180	-	-	-	-	-	2400	-
Chromium	mg/L	0.01 U	0.01 U	0.01 U	0.001 J	0.0011 J	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.00083 J	0.0019 J	**0.61[abc]**	0.0074 J
Chromium (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chromium III (trivalent)	mg/L	-	-	-	-	-	-	-	-	-	-	0.01 U	-	-	-
Chromium VI (hexavalent)	mg/L	-	-	-	-	-	-	-	-	-	-	0.0024 J	-	-	-
Cobalt	mg/L	0.00023 J	0.00043 J	0.00042 J	0.00041 J	0.00046 J	0.0014 J	0.0013 J	0.001 J	0.0003 J	0.00089 J	0.000097 J	0.00017 J	**0.24[abc]**	0.0022 J
Cobalt (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Copper	mg/L	0.00042 J	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	**0.5[c]**	0.0054
Copper (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Iron	mg/L	**3.7[ab]**	0.2 U	0.047 J	0.2 U	0.2 U	**5[ab]**	**5[ab]**	**0.59[ab]**	0.2 U	0.22	0.13 J	0.23	**660[ab]**	**5.3[ab]**
Iron (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lead	mg/L	0.00035 J	0.00022 J	0.00029 J	0.00015 J	0.003 U	0.00044	0.00099	0.00065 J	0.003 U	0.00054 J	0.003 U	0.00035 J	**0.21[abc]**	0.0025 J
Lead (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Magnesium	mg/L	-	-	-	-	-	29	30	-	-	-	-	-	**730[a]**	-
Manganese	mg/L	0.049 J	**0.1[ab]**	**0.1[ab]**	**0.11[ab]**	**0.12[ab]**	**0.33[ab]**	**0.33[ab]**	**0.27[ab]**	0.05 U	0.012 J	0.012 J	0.0067 J	**15[abc]**	**0.084[ab]**
Manganese (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mercury	mg/L	0.0002 U	0.04 U	0.04 U	0.0002 U	0.0002 U	0.04 U	0.04 U	0.0002 U	0.04 U	0.0002 U	0.04 U	0.0002 U	**0.00032 J[c]**	0.0002 U
Mercury (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nickel	mg/L	0.0054 J	0.0013 J	0.0014 J	0.0013 J	0.0013 J	0.0029 J	0.0028 J	0.0022 J	0.0083 J	0.023	0.00071 J	0.00087 J	**0.65[abc]**	0.0073 J
Nickel (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Potassium	mg/L	-	-	-	-	-	0.94 J	0.95 J	-	-	-	-	-	76	-
Selenium	mg/L	0.005 U	0.001 J	0.0011 J	0.00061 J	0.0006 J	0.005 U	0.005 U	0.005 U	0.003 J	**0.0091[c]**	0.0021 J	0.0012 J	**0.017[c]**	0.005 U
Selenium (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Silver	mg/L	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.00001 J	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	**0.0012[c]**	0.0002 U
Silver (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sodium	mg/L	-	-	-	-	-	39	40	-	-	-	-	-	63	-

TABLE 3.9

PART 201 CRITERIA EXCEEDANCES - GROUNDWATER
2013 RFI REPORT
FORMER GENRERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation		*WEST03*	*WEST03*	*WEST03*	*WEST03*	*WEST03*	*WEST03*	*WEST03*	*WEST03*	*WEST03*	*WEST03*	*WEST03*	*WEST04*	*WEST04*
Aquifer		*Intermediate*	*Intermediate*	*Intermediate*	*Intermediate*	*Intermediate*	*Intermediate*	*Intermediate*	*Intermediate*	*Shallow*	*Shallow*	*Shallow*	*Deep*	*Deep*
Perimeter Status (1)		*N*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*N*	*N*	*Y*	*Y*	*Y*
Sample Location		*CRA-787I*	*CRA-725I*	*CRA-725I*	*CRA-725I*	*CRA-725I*	*CRA-742I*	*CRA-742I*	*CRA-742I*	*CRA-307M*	*CRA-307M*	*CRA-725M*	*CRA-725M*	*CRA-742D*	*CRA-742D*
Sample Identification (GW-17358-)		*040113-CT-005*	*042412-DR-1088*	*042412-DR-1089*	*041513-DR-103*	*041513-DR-104*	*042312-DR-1081*	*042312-DR-1082*	*041013-DR-072*	*041312-DR-1009*	*040913-JY-070*	*042412-DR-1090*	*041513-DR-107*	*042312-DR-1083*	*041013-DR-071*
Sample Date		*4/1/2013*	*4/24/2012*	*4/24/2012*	*4/15/2013*	*4/15/2013*	*4/23/2012*	*4/23/2012*	*4/10/2013*	*4/13/2012*	*4/9/2013*	*4/24/2012*	*4/15/2013*	*4/23/2012*	*4/10/2013*
Sample Type				*Duplicate*		*Duplicate*		*Duplicate*							
Metals Continued															
Thallium	mg/L	0.00017 J	0.00022 J	0.00014 J	0.002 U	0.002 U	0.00028 J	0.00022 J	0.002 U	0.00025 J	0.002 U	0.002 U	0.002 U	**0.0068[abc]**	0.002 U
Thallium (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Vanadium	mg/L	0.004 U	0.0006 J	0.004 U	0.00035 J	0.00034 J	0.004 U	0.004 U	0.004 U	0.004 U	0.00073 J	0.004 U	0.0005 J	**0.96[abc]**	**0.012[a]**
Vanadium (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Zinc	mg/L	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	**1.3[c]**	0.05 U
Zinc (dissolved)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Polychlorinated Biphenyls (PCBs)															
Aroclor-1016 (PCB-1016)	mg/L	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.000099 U	0.000096 U	0.0001 U	0.000098 U	0.0001 U	0.0001 U	0.00011 U	0.000095 U	0.0001 U
Aroclor-1221 (PCB-1221)	mg/L	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.000099 U	0.000096 U	0.0001 U	0.000098 U	0.0001 U	0.0001 U	0.00011 U	0.000095 U	0.0001 U
Aroclor-1232 (PCB-1232)	mg/L	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.000099 U	0.000096 U	0.0001 U	0.000098 U	0.0001 U	0.0001 U	0.00011 U	0.000095 U	0.0001 U
Aroclor-1242 (PCB-1242)	mg/L	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.000099 U	0.000096 U	0.0001 U	0.000098 U	0.0001 U	0.0001 U	0.00011 U	0.000095 U	0.0001 U
Aroclor-1248 (PCB-1248)	mg/L	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.000099 U	0.000096 U	0.0001 U	0.000098 U	0.0001 U	0.0001 U	0.00011 U	0.000095 U	0.0001 U
Aroclor-1254 (PCB-1254)	mg/L	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.000099 U	0.000096 U	0.0001 U	0.000098 U	0.0001 U	0.0001 U	0.00011 U	0.000095 U	0.0001 U
Aroclor-1260 (PCB-1260)	mg/L	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.000099 U	0.000096 U	0.0001 U	0.000098 U	0.0001 U	0.0001 U	0.00011 U	0.000095 U	0.0001 U
Aroclor-1262 (PCB-1262)	mg/L	0.0001 U	-	-	0.0001 U	0.0001 U	0.000099 U	0.000096 U	0.0001 U	0.000098 U	0.0001 U	-	0.00011 U	0.000095 U	0.0001 U
Aroclor-1268 (PCB-1268)	mg/L	0.0001 U	-	-	0.0001 U	0.0001 U	0.000099 U	0.000096 U	0.0001 U	0.000098 U	0.0001 U	-	0.00011 U	0.000095 U	0.0001 U
Total PCBs	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
General Chemistry															
Cyanide (amenable)	mg/L	-	-	-	-	-	0.01 U	0.01 U	0.005 U	-	-	-	-	-	0.005 U
Phosphorus	mg/L	-	-	-	-	-	-	-	0.035 J	-	-	-	-	-	0.21
Field Parameters															
Turbidity, field	NTU	22.5	1.98	1.98	1.08	1.08	3.48	3.48	4.8	17.9	4.66	2.63	3.52	> 1000	253

Notes
Michigan Part 201 generic clean up criteria (updated September 28, 2012)
ID - Insufficient data to develop criterion
NLV - Hazardous substance is not likely to volatilize under most conditions
NA - Criterion or value is not available

Perimeter Status (1) - N - non-perimeter, Y - perimeter
mg/L - miligram per liter
NTU - Nephelometric Turbidity Unit

Notes:
U - Not detected at the associated reporting limit.
J - Estimated concentration.
UJ - Not detected; associated reporting limit is estimated.

TABLE 3.9

PART 201 CRITERIA EXCEEDANCES - GROUNDWATER
2013 RFI REPORT
FORMER GENRERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation		*WEST04*	*WEST04*	*WEST04*	*WEST04*	*WEST04*	*WEST04*	*WEST04*	*WEST04*	*WEST04*	*WEST04*	*WEST04*	*WEST04*	*WEST04*	*WEST04*
Aquifier		*Deep*	*Intermediate*	*Intermediate*	*Intermediate*	*Intermediate*	*Intermediate*	*Intermediate*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*
Perimeter Status (1)		*Y*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*Y*
Sample Location		*CRA-742D*	*CRA-729I*	*CRA-729I*	*CRA-740I*	*CRA-740I*	*CRA-741I*	*CRA-741I*	*CRA-729M*	*CRA-729M*	*CRA-740M*	*CRA-740M*	*CRA-740M*	*CRA-741M*	*CRA-605M*
Sample Identification (GW-17358-)		*041113-DR-084*	*042012-CB-1077*	*040313-CT-015*	*042012-CB-1075*	*040313-CT-017*	*042012-CB-1079*	*040313-CT-020*	*042012-CB-1076*	*040313-CT-016*	*042012-CB-1074*	*042012-CB-1078*	*040313-CT-018*	*040413-CT-025*	*042312-DR-1084*
Sample Date		*4/11/2013*	*4/20/2012*	*4/3/2013*	*4/20/2012*	*4/3/2013*	*4/20/2012*	*4/3/2013*	*4/20/2012*	*4/3/2013*	*4/20/2012*	*4/20/2012*	*4/3/2013*	*4/4/2013*	*4/23/2012*
Sample Type															
Volatile Organic Compounds (VOCs)	***Units***														
1,1,1-Trichloroethane	mg/L	0.001 U	0.0025 U	0.0025 U	0.001 U	0.001 U	0.001 U	0.0025 U	0.001 U	0.001 U	0.001 U	0.0033 U	0.001 U	0.001 U	0.001 U
1,1,2,2-Tetrachloroethane	mg/L	0.001 U	0.0025 U	0.0025 U	0.001 U	0.001 U	0.001 U	0.0025 U	0.001 U	0.001 U	0.001 U	0.0033 U	0.001 U	0.001 U	0.001 U
1,1,2-Trichloroethane	mg/L	0.001 U	0.0025 U	0.0025 U	0.001 U	0.001 U	0.001 U	0.0025 U	0.001 U	0.001 U	0.001 U	0.0033 U	0.001 U	0.001 U	0.001 U
1,1-Dichloroethane	mg/L	0.001 U	0.0025 U	0.0025 U	0.001 U	0.001 U	0.001 U	0.0025 U	0.001 U	0.001 U	0.001 U	0.0033 U	0.001 U	0.001 U	0.001 U
1,1-Dichloroethene	mg/L	0.001 U	0.0025 U	0.0025 U	0.001 U	0.001 U	0.001 U	0.0025 U	0.001 U	0.001 U	0.001 U	0.0033 U	0.001 U	0.001 U	0.001 U
1,2,4-Trichlorobenzene	mg/L	0.001 U	0.0025 U	0.0025 U	0.001 U	0.001 U	0.001 U	0.0025 U	0.001 U	0.001 U	0.001 U	0.0033 U	0.001 U	0.001 U	0.001 U
1,2-Dibromo-3-chloropropane (DBCP)	mg/L	0.001 U	0.0025 U	0.0025 U	0.001 U	0.001 U	0.001 U	0.0025 U	0.001 U	0.001 U	0.001 U	0.0033 U	0.001 U	0.001 U	0.001 U
1,2-Dibromoethane (Ethylene dibromide)	mg/L	0.001 U	0.0025 U	0.0025 U	0.001 U	0.001 U	0.001 U	0.0025 U	0.001 U	0.001 U	0.001 U	0.0033 U	0.001 U	0.001 U	0.001 U
1,2-Dichlorobenzene	mg/L	0.001 U	0.0025 U	0.0025 U	0.001 U	0.001 U	0.001 U	0.0025 U	0.001 U	0.001 U	0.001 U	0.0033 U	0.001 U	0.001 U	0.001 U
1,2-Dichloroethane	mg/L	0.001 U	0.0025 U	0.0025 U	0.001 U	0.001 U	0.001 U	0.0025 U	0.001 U	0.001 U	0.001 U	0.0033 U	0.001 U	0.001 U	0.001 U
1,2-Dichloropropane	mg/L	0.001 U	0.0025 U	0.0025 U	0.001 U	0.001 U	0.001 U	0.0025 U	0.001 U	0.001 U	0.001 U	0.0033 U	0.001 U	0.001 U	0.001 U
1,3-Dichlorobenzene	mg/L	0.001 U	0.0025 U	0.0025 U	0.001 U	0.001 U	0.001 U	0.0025 U	0.001 U	0.001 U	0.001 U	0.0033 U	0.001 U	0.001 U	0.001 U
1,4-Dichlorobenzene	mg/L	0.001 U	0.0025 U	0.0025 U	0.001 U	0.001 U	0.001 U	0.0025 U	0.001 U	0.001 U	0.001 U	0.0033 U	0.001 U	0.001 U	0.001 U
2-Butanone (Methyl ethyl ketone) (MEK)	mg/L	0.00057 J	0.025 U	0.025 U	0.01 U	0.01 U	0.01 U	0.025 U	0.01 U	0.01 U	0.01 U	0.033 U	0.01 U	0.01 U	0.01 U
2-Hexanone	mg/L	0.01 U	0.025 U	0.025 U	0.01 U	0.01 U	0.01 U	0.025 U	0.01 U	0.01 U	0.01 U	0.033 U	0.01 U	0.01 U	0.01 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	mg/L	0.01 U	0.025 U	0.025 U	0.01 U	0.01 U	0.01 U	0.025 U	0.01 U	0.01 U	0.01 U	0.033 U	0.01 U	0.01 U	0.01 U
Acetone	mg/L	0.01 U	0.025 U	0.025 U	0.01 U	0.01 U	0.01 U	0.025 U	0.01 U	0.01 U	0.01 U	0.033 U	0.01 U	0.01 U	0.01 U
Benzene	mg/L	0.001 U	0.0025 U	0.0025 U	0.001 U	0.001 U	0.001 U	0.0025 U	0.001 U	0.001 U	0.001 U	0.0033 U	0.001 U	0.001 U	0.001 U
Bromodichloromethane	mg/L	0.001 U	0.0025 U	0.0025 U	0.001 U	0.001 U	0.001 U	0.0025 U	0.001 U	0.001 U	0.001 U	0.0033 U	0.001 U	0.001 U	0.001 U
Bromoform	mg/L	0.001 U	0.0025 U	0.0025 U	0.001 U	0.001 U	0.001 U	0.0025 U	0.001 U	0.001 U	0.001 U	0.0033 U	0.001 U	0.001 U	0.001 U
Bromomethane (Methyl bromide)	mg/L	0.001 U	0.0025 U	0.0025 U	0.001 U	0.001 U	0.001 U	0.0025 U	0.001 U	0.001 U	0.001 U	0.0033 U	0.001 U	0.001 U	0.001 U
Carbon disulfide	mg/L	0.005 U	0.013 U	0.013 U	0.005 U	0.005 U	0.005 U	0.013 U	0.005 U	0.005 U	0.005 U	0.017 U	0.005 U	0.005 U	0.005 U
Carbon tetrachloride	mg/L	0.001 U	0.0025 U	0.0025 U	0.001 U	0.001 U	0.001 U	0.0025 U	0.001 U	0.001 U	0.001 U	0.0033 U	0.001 U	0.001 U	0.001 U
Chlorobenzene	mg/L	0.001 U	0.0025 U	0.0025 U	0.001 U	0.001 U	0.001 U	0.0025 U	0.001 U	0.001 U	0.001 U	0.0033 U	0.001 U	0.001 U	0.001 U
Chloroethane	mg/L	0.001 U	0.0025 U	0.0025 U	0.001 U	0.001 U	0.001 U	0.0025 U	0.001 U	0.001 U	0.001 U	0.0033 U	0.001 U	0.001 U	0.001 U
Chloroform (Trichloromethane)	mg/L	0.001 U	0.0025 U	0.0025 U	0.001 U	0.001 U	0.00039 J	0.0025 U	0.001 U	0.001 U	0.001 U	0.0033 U	0.001 U	0.00027 J	0.001 U
Chloromethane (Methyl chloride)	mg/L	0.001 U	0.0025 U	0.0025 U	0.001 U	0.001 U	0.001 U	0.0025 U	0.001 U	0.001 U	0.001 U	0.0033 U	0.001 U	0.001 U	0.001 U
cis-1,2-Dichloroethene	mg/L	0.001 U	0.057	0.058	0.001 U	0.001 U	0.00032 J	0.018	0.001 U	0.001 U	0.001 U	0.016	0.001 U	0.001 U	0.001 U
cis-1,3-Dichloropropene	mg/L	0.001 U	0.0025 U	0.0025 U	0.001 U	0.001 U	0.001 U	0.0025 U	0.001 U	0.001 U	0.001 U	0.0033 U	0.001 U	0.001 U	0.001 U
Cyclohexane	mg/L	0.001 U	0.0025 U	0.0025 U	0.001 U	0.001 U	0.001 U	0.0025 U	0.001 U	0.001 U	0.001 U	0.0033 U	0.001 U	0.001 U	0.001 U
Dibromochloromethane	mg/L	0.001 U	0.0025 U	0.0025 U	0.001 U	0.001 U	0.001 U	0.0025 U	0.001 U	0.001 U	0.001 U	0.0033 U	0.001 U	0.001 U	0.001 U
Dichlorodifluoromethane (CFC-12)	mg/L	0.001 U	0.0025 U	0.0025 U	0.001 U	0.001 U	0.001 U	0.0025 U	0.001 U	0.001 U	0.001 U	0.0033 U	0.001 U	0.001 U	0.001 U
Ethylbenzene	mg/L	0.001 U	0.0025 U	0.0025 U	0.001 U	0.001 U	0.001 U	0.0025 U	0.001 U	0.001 U	0.001 U	0.0033 U	0.001 U	0.001 U	0.001 U
Isopropyl benzene	mg/L	0.001 U	0.0025 U	0.0025 U	0.001 U	0.001 U	0.001 U	0.0025 U	0.001 U	0.001 U	0.001 U	0.0033 U	0.001 U	0.001 U	0.001 U
Methyl acetate	mg/L	0.01 U	0.025 U	0.025 U	0.01 U	0.01 U	0.01 U	0.025 U	0.01 U	0.01 U	0.01 U	0.033 U	0.01 U	0.01 U	0.01 U
Methyl cyclohexane	mg/L	0.001 U	0.0025 U	0.0025 U	0.001 U	0.001 U	0.001 U	0.0025 U	0.001 U	0.001 U	0.001 U	0.0033 U	0.001 U	0.001 U	0.001 U
Methyl tert butyl ether (MTBE)	mg/L	0.001 U	0.013 U	0.0025 U	0.005 U	0.001 U	0.005 U	0.0025 U	0.005 U	0.001 U	0.005 U	0.017 U	0.001 U	0.001 U	0.005 U
Methylene chloride	mg/L	0.005 U	0.013 U	0.013 U	0.005 U	0.005 U	0.005 U	0.013 U	0.005 U	0.005 U	0.005 U	0.017 U	0.005 U	0.005 U	0.005 U
Styrene	mg/L	0.001 U	0.0025 U	0.0025 U	0.001 U	0.001 U	0.001 U	0.0025 U	0.001 U	0.001 U	0.001 U	0.0033 U	0.001 U	0.001 U	0.001 U
Tetrachloroethene	mg/L	0.001 U	0.0025 U	0.0025 U	0.001 U	0.001 U	0.001 U	0.0025 U	0.001 U	0.001 U	0.001 U	0.0033 U	0.001 U	0.001 U	0.001 U
Toluene	mg/L	0.001 U	0.0025 U	0.0025 U	0.001 U	0.001 U	0.001 U	0.0025 U	0.001 U	0.001 U	0.001 U	0.0033 U	0.001 U	0.001 U	0.001 U
trans-1,2-Dichloroethene	mg/L	0.001 U	0.003	0.0032	0.001 U	0.001 U	0.001 U	0.0022 J	0.001 U	0.001 U	0.001 U	0.011	0.001 U	0.001 U	0.001 U
trans-1,3-Dichloropropene	mg/L	0.001 U	0.0025 U	0.0025 U	0.001 U	0.001 U	0.001 U	0.0025 U	0.001 U	0.001 U	0.001 U	0.0033 U	0.001 U	0.001 U	0.001 U
Trichloroethene	mg/L	0.001 U	**0.0065**[b]	**0.0076**[b]	0.001 U	0.001 U	**0.015**[b]	0.0025 U	0.005	0.005	0.001 U	0.0033 U	0.001 U	**0.0081**[b]	0.001 U
Trichlorofluoromethane (CFC-11)	mg/L	0.001 U	0.0025 U	0.0025 U	0.001 U	0.001 U	0.001 U	0.0025 U	0.001 U	0.001 U	0.001 U	0.0033 U	0.001 U	0.001 U	0.001 U
Trifluorotrichloroethane (Freon 113)	mg/L	0.001 U	0.0025 U	0.0025 U	0.001 U	0.001 U	0.001 U	0.0025 U	0.001 U	0.001 U	0.001 U	0.0033 U	0.001 U	0.001 U	0.001 U
Vinyl chloride	mg/L	0.001 U	**0.06**[bc]	**0.065**[bc]	0.001 U	0.001 U	0.001 U	**0.058**[bc]	0.001 U	0.001 U	0.001 U	**0.073**[bc]	0.001 U	0.001 U	0.001 U
Xylenes (total)	mg/L	0.002 U	0.005 U	0.005 U	0.002 U	0.002 U	0.002 U	0.005 U	0.002 U	0.002 U	0.002 U	0.0067 U	0.002 U	0.002 U	0.002 U

TABLE 3.9

PART 201 CRITERIA EXCEEDANCES - GROUNDWATER
2013 RFI REPORT
FORMER GENRERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation		*WEST04*	*WEST04*	*WEST04*	*WEST04*	*WEST04*	*WEST04*	*WEST04*	*WEST04*	*WEST04*	*WEST04*	*WEST04*	*WEST04*	*WEST04*	*WEST04*
Aquifier		*Deep*	*Intermediate*	*Intermediate*	*Intermediate*	*Intermediate*	*Intermediate*	*Intermediate*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*
Perimeter Status (1)		*Y*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*Y*
Sample Location		*CRA-742D*	*CRA-729I*	*CRA-729I*	*CRA-740I*	*CRA-740I*	*CRA-741I*	*CRA-741I*	*CRA-729M*	*CRA-729M*	*CRA-740M*	*CRA-740M*	*CRA-740M*	*CRA-741M*	*CRA-605M*
Sample Identification (GW-17358-)		*041113-DR-084*	*042012-CB-1077*	*040313-CT-015*	*042012-CB-1075*	*040313-CT-017*	*042012-CB-1079*	*040313-CT-020*	*042012-CB-1076*	*040313-CT-016*	*042012-CB-1074*	*042012-CB-1078*	*040313-CT-018*	*040413-CT-025*	*042312-DR-1084*
Sample Date		*4/11/2013*	*4/20/2012*	*4/3/2013*	*4/20/2012*	*4/3/2013*	*4/20/2012*	*4/3/2013*	*4/20/2012*	*4/3/2013*	*4/20/2012*	*4/20/2012*	*4/3/2013*	*4/4/2013*	*4/23/2012*
Sample Type															
Semi-Volatile Organic Compounds (SVOCs)															
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	mg/L	0.0052 U	0.0053 U	0.0048 U	0.0049 U	0.0053 U	0.0049 U	0.0048 U	0.0051 U	0.0052 U	0.0049 U	0.005 U	0.0049 U	0.005 U	0.005 U
2,4,5-Trichlorophenol	mg/L	0.0052 U	0.0053 U	0.0048 U	0.0049 U	0.0053 U	0.0049 U	0.0048 U	0.0051 U	0.0052 U	0.0049 U	0.005 U	0.0049 U	0.005 U	0.005 U
2,4,6-Trichlorophenol	mg/L	0.0041 U	0.0042 U	0.0038 U	0.0039 U	0.0043 U	0.0039 U	0.0038 U	0.004 U	0.0041 U	0.0039 U	0.004 U	0.0039 U	0.004 U	0.004 U
2,4-Dichlorophenol	mg/L	0.01 U	0.011 U	0.0095 U	0.0097 U	0.011 U	0.0098 U	0.0096 U	0.01 U	0.01 U	0.0098 U	0.0099 U	0.0098 U	0.0099 U	0.0099 U
2,4-Dimethylphenol	mg/L	0.0052 U	0.0053 U	0.0048 U	0.0049 U	0.0053 U	0.0049 U	0.0048 U	0.0051 U	0.0052 U	0.0049 U	0.005 U	0.0049 U	0.005 U	0.005 U
2,4-Dinitrophenol	mg/L	0.021 U	0.021 U	0.019 U	0.019 U	0.021 U	0.02 U	0.019 U	0.02 U	0.021 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
2,4-Dinitrotoluene	mg/L	0.0052 U	0.0053 U	0.0048 U	0.0049 U	0.0053 U	0.0049 U	0.0048 U	0.0051 U	0.0052 U	0.0049 U	0.005 U	0.0049 U	0.005 U	0.005 U
2,6-Dinitrotoluene	mg/L	0.0052 U	0.0053 U	0.0048 U	0.0049 U	0.0053 U	0.0049 U	0.0048 U	0.0051 U	0.0052 U	0.0049 U	0.005 U	0.0049 U	0.005 U	0.005 U
2-Chloronaphthalene	mg/L	0.0052 U	0.0053 U	0.0048 U	0.0049 U	0.0053 U	0.0049 U	0.0048 U	0.0051 U	0.0052 U	0.0049 U	0.005 U	0.0049 U	0.005 U	0.005 U
2-Chlorophenol	mg/L	0.0052 U	0.0053 U	0.0048 U	0.0049 U	0.0053 U	0.0049 U	0.0048 U	0.0051 U	0.0052 U	0.0049 U	0.005 U	0.0049 U	0.005 U	0.005 U
2-Methylnaphthalene	mg/L	0.0052 U	0.0053 U	0.0048 U	0.0049 U	0.0053 U	0.0049 U	0.0048 U	0.0051 U	0.0052 U	0.0049 U	0.005 U	0.0049 U	0.005 U	0.005 U
2-Methylphenol	mg/L	0.0052 U	0.0053 U	0.0048 U	0.0049 U	0.0053 U	0.0049 U	0.0048 U	0.0051 U	0.0052 U	0.0049 U	0.005 U	0.0049 U	0.005 U	0.005 U
2-Nitroaniline	mg/L	0.021 U	0.021 U	0.019 U	0.019 U	0.021 U	0.02 U	0.019 U	0.02 U	0.021 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
2-Nitrophenol	mg/L	0.0052 U	0.0053 U	0.0048 U	0.0049 U	0.0053 U	0.0049 U	0.0048 U	0.0051 U	0.0052 U	0.0049 U	0.005 U	0.0049 U	0.005 U	0.005 U
3&4-Methylphenol	mg/L	0.0052 U	0.0053 U	0.0048 U	0.0049 U	0.0053 U	0.0049 U	0.0048 U	0.0051 U	0.0052 U	0.0049 U	0.005 U	0.0049 U	0.005 U	0.005 U
3,3'-Dichlorobenzidine	mg/L	0.001 U	0.0011 U	R	0.00097 U	0.0011 U	0.00098 U	0.00096 U	0.001 U	0.001 U	0.00098 U	0.00099 U	0.00098 U	0.00099 U	0.00099 U
3-Nitroaniline	mg/L	0.021 U	0.021 U	0.019 U	0.019 U	0.021 U	0.02 U	0.019 U	0.02 U	0.021 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
4,6-Dinitro-2-methylphenol	mg/L	0.021 U	0.021 U	0.019 U	0.019 U	0.021 U	0.02 U	0.019 U	0.02 U	0.021 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
4-Bromophenyl phenyl ether	mg/L	0.0052 U	0.0053 U	0.0048 U	0.0049 U	0.0053 U	0.0049 U	0.0048 U	0.0051 U	0.0052 U	0.0049 U	0.005 U	0.0049 U	0.005 U	0.005 U
4-Chloro-3-methylphenol	mg/L	0.0052 U	0.0053 U	0.0048 U	0.0049 U	0.0053 U	0.0049 U	0.0048 U	0.0051 U	0.0052 U	0.0049 U	0.005 U	0.0049 U	0.005 U	0.005 U
4-Chloroaniline	mg/L	0.01 U	0.011 U	0.0095 U	0.0097 U	0.011 U	0.0098 U	0.0096 U	0.01 U	0.01 U	0.0098 U	0.0099 U	0.0098 U	0.0099 U	0.0099 U
4-Chlorophenyl phenyl ether	mg/L	0.0052 U	0.0053 U	0.0048 U	0.0049 U	0.0053 U	0.0049 U	0.0048 U	0.0051 U	0.0052 U	0.0049 U	0.005 U	0.0049 U	0.005 U	0.005 U
4-Nitroaniline	mg/L	0.021 U	0.021 U	0.019 U	0.019 U	0.021 U	0.02 U	0.019 U	0.02 U	0.021 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
4-Nitrophenol	mg/L	0.021 U	0.021 U	0.019 U	0.019 U	0.021 U	0.02 U	0.019 U	0.02 U	0.021 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Acenaphthene	mg/L	0.0052 U	0.0053 U	0.0048 U	0.0049 U	0.0053 U	0.0049 U	0.0048 U	0.0051 U	0.0052 U	0.0049 U	0.005 U	0.0049 U	0.005 U	0.005 U
Acenaphthylene	mg/L	0.0052 U	0.0053 U	0.0048 U	0.0049 U	0.0053 U	0.0049 U	0.0048 U	0.0051 U	0.0052 U	0.0049 U	0.005 U	0.0049 U	0.005 U	0.005 U
Acetophenone	mg/L	0.0052 U	0.0053 U	0.0048 U	0.0049 U	0.0053 U	0.0049 U	0.0048 U	0.0051 U	0.0052 U	0.0049 U	0.005 U	0.0049 U	0.005 U	0.005 U
Anthracene	mg/L	0.0052 U	0.0053 U	0.0048 U	0.0049 U	0.0053 U	0.0049 U	0.0048 U	0.0051 U	0.0052 U	0.0049 U	0.005 U	0.0049 U	0.005 U	0.005 U
Atrazine	mg/L	0.0031 U	0.0032 U	0.0029 U	0.0029 U	0.0032 U	0.0029 U	0.0029 U	0.003 U	0.0031 U	0.0029 U	0.003 U	0.0029 U	0.003 U	0.003 U
Benzaldehyde	mg/L	0.0052 U	0.0053 U	0.0048 U	0.0049 U	0.0053 U	0.0049 U	0.0048 U	0.0051 U	0.0052 U	0.0049 U	0.005 U	0.0049 U	0.005 U	0.005 U
Benzo(a)anthracene	mg/L	0.001 U	0.0011 U	0.00095 U	0.00097 U	0.0011 U	0.00098 U	0.00096 U	0.001 U	0.001 U	0.00098 U	0.00099 U	0.00098 U	0.00099 U	0.00099 U
Benzo(a)pyrene	mg/L	0.001 U	0.0011 U	0.00095 U	0.00097 U	0.0011 U	0.00098 U	0.00096 U	0.001 U	0.001 U	0.00098 U	0.00099 U	0.00098 U	0.00099 U	0.00099 U
Benzo(b)fluoranthene	mg/L	0.001 U	0.0011 U	0.00095 U	0.00097 U	0.0011 U	0.00098 U	0.00096 U	0.001 U	0.001 U	0.00098 U	0.00099 U	0.00098 U	0.00099 U	0.00099 U
Benzo(g,h,i)perylene	mg/L	0.001 U	0.0011 U	0.00095 U	0.00097 U	0.0011 U	0.00098 U	0.00096 U	0.001 U	0.00013 J	0.00098 U	0.00099 U	0.00098 U	0.00099 U	0.00099 U
Benzo(k)fluoranthene	mg/L	0.001 U	0.0011 U	0.00095 U	0.00097 U	0.0011 U	0.00098 U	0.00096 U	0.001 U	0.001 U	0.00098 U	0.00099 U	0.00098 U	0.00099 U	0.00099 U
Biphenyl (1,1-Biphenyl)	mg/L	0.0052 U	0.0053 U	0.0048 U	0.0049 U	0.0053 U	0.0049 U	0.0048 U	0.0051 U	0.0052 U	0.0049 U	0.005 U	0.0049 U	0.005 U	0.005 U
bis(2-Chloroethoxy)methane	mg/L	0.0052 U	0.0053 U	0.0048 U	0.0049 U	0.0053 U	0.0049 U	0.0048 U	0.0051 U	0.0052 U	0.0049 U	0.005 U	0.0049 U	0.005 U	0.005 U
bis(2-Chloroethyl)ether	mg/L	0.001 U	0.0011 U	0.00095 U	0.00097 U	0.0011 U	0.00098 U	0.00096 U	0.001 U	0.001 U	0.00098 U	0.00099 U	0.00098 U	0.00099 U	0.00099 U
bis(2-Ethylhexyl)phthalate (DEHP)	mg/L	0.0052 U	0.0053 U	0.0048 U	0.0049 U	0.0053 U	0.0049 U	0.0048 U	0.0051 U	0.0052 U	0.0049 U	0.005 U	0.0049 U	0.005 U	0.005 U
Butyl benzylphthalate (BBP)	mg/L	0.0052 U	0.0053 U	0.0048 U	0.0049 U	0.0053 U	0.0049 U	0.0048 U	0.0051 U	0.0052 U	0.0049 U	0.005 U	0.0049 U	0.005 U	0.005 U
Caprolactam	mg/L	0.01 U	0.011 U	0.0095 U	0.0018 J	0.0051 J	0.0098 U	0.0011 J	0.01 U	0.01 U	0.0098 U	0.0099 U	0.0098 U	0.0099 U	0.0099 U
Carbazole	mg/L	0.01 U	0.011 U	0.0095 U	0.0097 U	0.011 U	0.0098 U	0.0096 U	0.01 U	0.01 U	0.0098 U	0.0099 U	0.0098 U	0.0099 U	0.0099 U
Chrysene	mg/L	0.001 U	0.0011 U	0.00095 U	0.00097 U	0.0011 U	0.00098 U	0.00096 U	0.001 U	0.001 U	0.00098 U	0.00099 U	0.00098 U	0.00099 U	0.00099 U
Dibenz(a,h)anthracene	mg/L	0.0021 U	0.0021 U	0.0019 U	0.0019 U	0.0021 U	0.002 U	0.0019 U	0.002 U	0.00021 J	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
Dibenzofuran	mg/L	0.0041 U	0.0042 U	0.0038 U	0.0039 U	0.0043 U	0.0039 U	0.0038 U	0.004 U	0.0041 U	0.0039 U	0.004 U	0.0039 U	0.004 U	0.004 U
Diethyl phthalate	mg/L	0.0052 U	0.0053 U	0.0048 U	0.0049 U	0.0053 U	0.0049 U	0.0048 U	0.0051 U	0.0052 U	0.0049 U	0.005 U	0.0049 U	0.005 U	0.005 U
Dimethyl phthalate	mg/L	0.0052 U	0.0053 U	0.0048 U	0.0049 U	0.0053 U	0.0049 U	0.0048 U	0.0051 U	0.0052 U	0.0049 U	0.005 U	0.0049 U	0.005 U	0.005 U
Di-n-butylphthalate (DBP)	mg/L	0.0052 U	0.0053 U	0.0048 U	0.0049 U	0.0053 U	0.0049 U	0.0048 U	0.0051 U	0.0052 U	0.0049 U	0.005 U	0.0049 U	0.005 U	0.005 U
Di-n-octyl phthalate (DnOP)	mg/L	0.0052 U	0.0053 U	0.0048 U	0.0049 U	0.0053 U	0.0049 U	0.0048 U	0.0051 U	0.0052 U	0.0049 U	0.005 U	0.0049 U	0.005 U	0.005 U
Fluoranthene	mg/L	0.001 U	0.0011 U	0.00095 U	0.00097 U	0.0011 U	0.00098 U	0.00096 U	0.001 U	0.001 U	0.00098 U	0.00099 U	0.00098 U	0.00099 U	0.00099 U
Fluorene	mg/L	0.0052 U	0.0053 U	0.0048 U	0.0049 U	0.0053 U	0.0049 U	0.0048 U	0.0051 U	0.0052 U	0.0049 U	0.005 U	0.0049 U	0.005 U	0.005 U
Hexachlorobenzene	mg/L	0.00021 U	0.00021 U	0.00019 U	0.00019 U	0.00021 U	0.0002 U	0.00019 U	0.0002 U	0.00021 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U

TABLE 3.9

PART 201 CRITERIA EXCEEDANCES - GROUNDWATER
2013 RFI REPORT
FORMER GENRERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation		*WEST04*	*WEST04*	*WEST04*	*WEST04*	*WEST04*	*WEST04*	*WEST04*	*WEST04*	*WEST04*	*WEST04*	*WEST04*	*WEST04*	*WEST04*	*WEST04*
Aquifer		*Deep*	*Intermediate*	*Intermediate*	*Intermediate*	*Intermediate*	*Intermediate*	*Intermediate*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*
Perimeter Status (1)		*Y*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*Y*
Sample Location		*CRA-742D*	*CRA-729I*	*CRA-729I*	*CRA-740I*	*CRA-740I*	*CRA-741I*	*CRA-741I*	*CRA-729M*	*CRA-729M*	*CRA-740M*	*CRA-740M*	*CRA-740M*	*CRA-741M*	*CRA-605M*
Sample Identification (GW-17358-)		*041113-DR-084*	*042012-CB-1077*	*040313-CT-015*	*042012-CB-1075*	*040313-CT-017*	*042012-CB-1079*	*040313-CT-020*	*042012-CB-1076*	*040313-CT-016*	*042012-CB-1074*	*042012-CB-1078*	*040313-CT-018*	*040413-CT-025*	*042312-DR-1084*
Sample Date		*4/11/2013*	*4/20/2012*	*4/3/2013*	*4/20/2012*	*4/3/2013*	*4/20/2012*	*4/3/2013*	*4/20/2012*	*4/3/2013*	*4/20/2012*	*4/20/2012*	*4/3/2013*	*4/4/2013*	*4/23/2012*
Sample Type															
SVOCs Continued															
Hexachlorobutadiene	mg/L	0.001 U	0.0011 U	0.00095 U	0.00097 U	0.0011 U	0.00098 U	0.00096 U	0.001 U	0.001 U	0.00098 U	0.00099 U	0.00098 U	0.00099 U	0.00099 U
Hexachlorocyclopentadiene	mg/L	R	0.0053 U	0.0048 U	0.0049 U	0.0053 U	0.0049 U	0.0048 U	0.0051 U	0.0052 U	0.0049 U	0.005 U	0.0049 U	0.005 U	0.005 U
Hexachloroethane	mg/L	0.0052 U	0.0053 U	0.0048 U	0.0049 U	0.0053 U	0.0049 U	0.0048 U	0.0051 U	0.0052 U	0.0049 U	0.005 U	0.0049 U	0.005 U	0.005 U
Indeno(1,2,3-cd)pyrene	mg/L	0.0021 U	0.0021 U	0.0019 U	0.0019 U	0.0021 U	0.002 U	0.0019 U	0.002 U	**0.00015 J[c]**	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
Isophorone	mg/L	0.0052 U	0.0053 U	0.0048 U	0.0049 U	0.0053 U	0.0049 U	0.0048 U	0.0051 U	0.0052 U	0.0049 U	0.005 U	0.0049 U	0.005 U	0.005 U
Naphthalene	mg/L	0.0052 U	0.0053 U	0.0048 U	0.0049 U	0.0053 U	0.0049 U	0.0048 U	0.0051 U	0.0052 U	0.0049 U	0.005 U	0.0049 U	0.005 U	0.005 U
Nitrobenzene	mg/L	0.0031 U	0.0032 U	0.0029 U	0.0029 U	0.0032 U	0.0029 U	0.0029 U	0.003 U	0.0031 U	0.0029 U	0.003 U	0.0029 U	0.003 U	0.003 U
N-Nitrosodi-n-propylamine	mg/L	0.0052 U	0.0053 U	0.0048 U	0.0049 U	0.0053 U	0.0049 U	0.0048 U	0.0051 U	0.0052 U	0.0049 U	0.005 U	0.0049 U	0.005 U	0.005 U
N-Nitrosodiphenylamine	mg/L	0.0052 U	0.0053 U	0.0048 U	0.0049 U	0.0053 U	0.0049 U	0.0048 U	0.0051 U	0.0052 U	0.0049 U	0.005 U	0.0049 U	0.005 U	0.005 U
Pentachlorophenol	mg/L	0.0052 U	0.0053 U	0.0048 U	0.0049 U	0.0053 U	0.0049 U	0.0048 U	0.0051 U	0.0052 U	0.0049 U	0.005 U	0.0049 U	0.005 U	0.005 U
Phenanthrene	mg/L	0.0021 U	0.0021 U	0.0019 U	0.0019 U	0.0021 U	0.002 U	0.0019 U	0.002 U	0.0021 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
Phenol	mg/L	0.0052 U	0.0053 U	0.0048 U	0.0049 U	0.0053 U	0.0049 U	0.0048 U	0.0051 U	0.0052 U	0.0049 U	0.005 U	0.0049 U	0.005 U	0.005 U
Pyrene	mg/L	0.0052 U	0.0053 U	0.0048 U	0.0049 U	0.0053 U	0.0049 U	0.0048 U	0.0051 U	0.0052 U	0.0049 U	0.005 U	0.0049 U	0.005 U	0.005 U
Metals															
Aluminum	mg/L	**17 J[ab]**	**0.15[b]**	0.021 J	0.028 J	0.05 U	0.05 U	0.05 U	**3.4[b]**	**1.2[b]**	**0.22[b]**	0.05 U	0.027 J	0.02 J	**0.15[ab]**
Aluminum (dissolved)	mg/L	0.038 J	-	-	-	-	-	-	-	-	-	-	-	-	-
Antimony	mg/L	0.002 U	0.00034 J	0.002 U	0.00015 J	0.002 U	0.00087 J	0.002 U	0.0017 J	0.002 U	0.0024	0.00016 J	0.0032 U	0.002 U	0.002 U
Antimony (dissolved)	mg/L	0.002 U	-	-	-	-	-	-	-	-	-	-	-	-	-
Arsenic	mg/L	0.0085	0.0042 J	0.0045 J	0.0063	0.0062	0.00088 J	**0.011[bc]**	0.003 J	0.0028 J	**0.014[bc]**	0.0059	0.002 J	0.0004 J	0.0029 J
Arsenic (dissolved)	mg/L	0.003 J	-	-	-	-	-	-	-	-	-	-	-	-	-
Barium	mg/L	0.2	0.26	0.28	0.079 J	0.085 J	0.1	0.32	0.025 J	0.016 J	0.067 J	0.46	0.033 J	0.18	0.065 J
Barium (dissolved)	mg/L	0.067 J	-	-	-	-	-	-	-	-	-	-	-	-	-
Beryllium	mg/L	0.0009 J	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Beryllium (dissolved)	mg/L	0.001 U	-	-	-	-	-	-	-	-	-	-	-	-	-
Cadmium	mg/L	0.00014 J	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Cadmium (dissolved)	mg/L	0.001 U	-	-	-	-	-	-	-	-	-	-	-	-	-
Calcium	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	78
Chromium	mg/L	**0.032[c]**	0.01 U	0.01 U	0.01 U	0.01 U	0.0088 J	0.01 U	**0.013[c]**	**0.012[c]**	**0.016[c]**	0.01 U	**0.017[c]**	0.0095 J	0.01 U
Chromium (dissolved)	mg/L	0.01 U	-	-	-	-	-	-	-	-	-	-	-	-	-
Chromium III (trivalent)	mg/L	-	-	-	-	-	0.01 U	-	-	-	-	0.01 U	-	-	0.01 U
Chromium VI (hexavalent)	mg/L	-	-	-	-	-	0.0061 J	-	-	-	-	0.01 U	-	-	0.01 U
Cobalt	mg/L	0.011 J	0.00038 J	0.00047 J	0.00038 J	0.00033 J	0.02 U	0.00027 J	0.0012 J	0.00081 J	0.00063 J	0.00062 J	0.00045 J	0.00031 J	0.00034 J
Cobalt (dissolved)	mg/L	0.00015 J	-	-	-	-	-	-	-	-	-	-	-	-	-
Copper	mg/L	0.022	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.0054	0.0031 J	0.0026 J	0.004 U	0.0026 J	0.004 U	0.004 U
Copper (dissolved)	mg/L	0.004 U	-	-	-	-	-	-	-	-	-	-	-	-	-
Iron	mg/L	**26[ab]**	**1.1[b]**	**1.5[b]**	0.27	**0.35[b]**	0.2 U	**2.5[b]**	**2.5[b]**	**1.2[b]**	0.17 J	**1.4[b]**	0.2 U	0.2 U	**0.99[ab]**
Iron (dissolved)	mg/L	0.2 U	-	-	-	-	-	-	-	-	-	-	-	-	-
Lead	mg/L	**0.0098[ab]**	0.003 U	0.003 U	0.003 U	0.0015 J	0.003 U	0.003	0.0013 J	0.00082 J	0.003 U	0.003 U	0.003 U	0.003 U	0.00037 J
Lead (dissolved)	mg/L	0.003 U	-	-	-	-	-	-	-	-	-	-	-	-	-
Magnesium	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	16
Manganese	mg/L	**0.39[ab]**	**0.18[b]**	**0.26[b]**	**0.14[b]**	**0.21[b]**	0.0048 J	**0.25[b]**	0.025 J	0.017 J	0.012 J	**0.34[b]**	0.05 U	0.0045 J	**0.66[ab]**
Manganese (dissolved)	mg/L	0.011 J	-	-	-	-	-	-	-	-	-	-	-	-	-
Mercury	mg/L	0.0002 U	0.04 U	0.0002 U	0.04 U	0.0002 U	0.04 U	0.0002 U	0.04 U	0.0002 U	0.04 U	0.04 U	0.0002 U	**0.00032[c]**	0.04 U
Mercury (dissolved)	mg/L	0.0002 U	-	-	-	-	-	-	-	-	-	-	-	-	-
Nickel	mg/L	0.032	0.0042 J	0.0039 J	0.0018 J	0.0017 J	0.001 J	0.0031 J	0.0035 J	0.002 J	0.0011 J	0.0029 J	0.0015 J	0.0012 J	0.0013 J
Nickel (dissolved)	mg/L	0.02 U	-	-	-	-	-	-	-	-	-	-	-	-	-
Potassium	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	1.5 J
Selenium	mg/L	0.0016 J	0.00075 J	0.005 U	0.005 U	0.005 U	0.0037 J	0.005 U	0.0025 J	0.0039 J	0.0037 J	0.005 U	0.0048 J	0.0028 J	0.005 U
Selenium (dissolved)	mg/L	0.005 U	-	-	-	-	-	-	-	-	-	-	-	-	-
Silver	mg/L	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Silver (dissolved)	mg/L	0.0002 U	-	-	-	-	-	-	-	-	-	-	-	-	-
Sodium	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	72

TABLE 3.9

PART 201 CRITERIA EXCEEDANCES - GROUNDWATER
2013 RFI REPORT
FORMER GENRERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation		*WEST04*	*WEST04*	*WEST04*	*WEST04*	*WEST04*	*WEST04*	*WEST04*	*WEST04*	*WEST04*	*WEST04*	*WEST04*	*WEST04*	*WEST04*	*WEST04*
Aquifier		*Deep*	*Intermediate*	*Intermediate*	*Intermediate*	*Intermediate*	*Intermediate*	*Intermediate*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*	*Shallow*
Perimeter Status (1)		*Y*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*Y*
Sample Location		*CRA-742D*	*CRA-729I*	*CRA-729I*	*CRA-740I*	*CRA-740I*	*CRA-741I*	*CRA-741I*	*CRA-729M*	*CRA-729M*	*CRA-740M*	*CRA-740M*	*CRA-740M*	*CRA-741M*	*CRA-605M*
Sample Identification (GW-17358-)		*041113-DR-084*	*042012-CB-1077*	*040313-CT-015*	*042012-CB-1075*	*040313-CT-017*	*042012-CB-1079*	*040313-CT-020*	*042012-CB-1076*	*040313-CT-016*	*042012-CB-1074*	*042012-CB-1078*	*040313-CT-018*	*040413-CT-025*	*042312-DR-1084*
Sample Date		*4/11/2013*	*4/20/2012*	*4/3/2013*	*4/20/2012*	*4/3/2013*	*4/20/2012*	*4/3/2013*	*4/20/2012*	*4/3/2013*	*4/20/2012*	*4/20/2012*	*4/3/2013*	*4/4/2013*	*4/23/2012*
Sample Type															
Metals Continued															
Thallium	mg/L	0.00061 J	0.00019 J	0.0008 J	0.00031 J	0.00028 J	0.00018 J	0.002 U	0.0003 J	0.00043 J	0.00015 J	0.00016 J	0.00021 J	0.002 U	0.00021 J
Thallium (dissolved)	mg/L	0.00038 J	-	-	-	-	-	-	-	-	-	-	-	-	-
Vanadium	mg/L	**0.049**[ac]	0.0012 J	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.0081	0.0029 J	0.012	0.004 U	0.00049 J	0.004 U	0.004 U
Vanadium (dissolved)	mg/L	0.004 U	-	-	-	-	-	-	-	-	-	-	-	-	-
Zinc	mg/L	0.093 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Zinc (dissolved)	mg/L	0.05 U	-	-	-	-	-	-	-	-	-	-	-	-	-
Polychlorinated Biphenyls (PCBs)															
Aroclor-1016 (PCB-1016)	mg/L	0.000096 U	0.00011 U	0.000095 U	0.000095 U	0.00011 U	0.000095 U	0.0000097 U	0.00011 U	0.0001 U	0.000097 U	0.000095 U	0.000098 U	0.000099 U	0.000095 U
Aroclor-1221 (PCB-1221)	mg/L	0.000096 U	0.00011 U	0.000095 U	0.000095 U	0.00011 U	0.000095 U	0.0000097 U	0.00011 U	0.0001 U	0.000097 U	0.000095 U	0.000098 U	0.000099 U	0.000095 U
Aroclor-1232 (PCB-1232)	mg/L	0.000096 U	0.00011 U	0.000095 U	0.000095 U	0.00011 U	0.000095 U	0.0000097 U	0.00011 U	0.0001 U	0.000097 U	0.000095 U	0.000098 U	0.000099 U	0.000095 U
Aroclor-1242 (PCB-1242)	mg/L	0.000096 U	0.00011 U	0.000095 U	0.000095 U	0.00011 U	0.000095 U	0.0000097 U	0.00011 U	0.0001 U	0.000097 U	0.000095 U	0.000098 U	0.000099 U	0.000095 U
Aroclor-1248 (PCB-1248)	mg/L	0.000096 U	0.00011 U	0.000095 U	0.000095 U	0.00011 U	0.000095 U	0.0000097 U	0.00011 U	0.0001 U	0.000097 U	0.000095 U	0.000098 U	0.000099 U	0.000095 U
Aroclor-1254 (PCB-1254)	mg/L	0.000096 U	0.00011 U	0.000095 U	0.000095 U	0.00011 U	0.000095 U	0.0000097 U	0.00011 U	0.0001 U	0.000097 U	0.000095 U	0.000098 U	0.000099 U	0.000095 U
Aroclor-1260 (PCB-1260)	mg/L	0.000096 U	0.00011 UJ	0.000095 U	0.000095 UJ	0.00011 U	0.000095 UJ	0.0000097 U	0.00011 UJ	0.0001 U	0.000097 UJ	0.000095 UJ	0.000098 U	0.000099 U	0.000095 U
Aroclor-1262 (PCB-1262)	mg/L	0.000096 U	-	0.000095 U	-	0.00011 U	-	0.0000097 U	-	0.0001 U	-	-	0.000098 U	0.000099 U	0.000095 U
Aroclor-1268 (PCB-1268)	mg/L	0.000096 U	-	0.000095 U	-	0.00011 U	-	0.0000097 U	-	0.0001 U	-	-	0.000098 U	0.000099 U	0.000095 U
Total PCBs	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
General Chemistry															
Cyanide (amenable)	mg/L	0.005 U	-	-	-	-	-	-	-	-	-	-	-	-	0.01 U
Phosphorus	mg/L	0.52	-	-	-	0.1 U	-	-	-	-	-	-	0.1 U	-	-
Field Parameters															
Turbidity, field	NTU	253	6.02	10.1	4.88	3.90	2.16	12.00	36.4	27	8.69	2.94	2.33	3.28	4.8

Notes
Michigan Part 201 generic clean up criteria (updated September 28, 2012)
ID - Insufficient data to develop criterion
NLV - Hazardous substance is not likely to volatilize under most conditions
NA - Criterion or value is not available

Perimeter Status (1) - N - non-perimeter, Y - perimeter
mg/L - miligram per liter
NTU - Nephelometric Turbidity Unit

Notes:
U - Not detected at the associated reporting limit.
J - Estimated concentration.
UJ - Not detected; associated reporting limit is estimated.

TABLE 3.9

PART 201 CRITERIA EXCEEDANCES - GROUNDWATER
2013 RFI REPORT
FORMER GENRERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation		***WEST04***	***WEST04***
Aquifier		***Shallow***	***Shallow***
Perimeter Status (1)		***Y***	***Y***
Sample Location		***CRA-605M***	***CRA-606M***
Sample Identification (GW-17358-)		***041013-DR-073***	***042412-DR-1086***
Sample Date		***4/10/2013***	***4/24/2012***
Sample Type			
Volatile Organic Compounds (VOCs)	***Units***		
1,1,1-Trichloroethane	mg/L	0.001 U	0.001 U
1,1,2,2-Tetrachloroethane	mg/L	0.001 U	0.001 U
1,1,2-Trichloroethane	mg/L	0.001 U	0.001 U
1,1-Dichloroethane	mg/L	0.001 U	0.001 U
1,1-Dichloroethene	mg/L	0.001 U	0.001 U
1,2,4-Trichlorobenzene	mg/L	0.001 U	0.001 U
1,2-Dibromo-3-chloropropane (DBCP)	mg/L	0.001 U	0.001 U
1,2-Dibromoethane (Ethylene dibromide)	mg/L	0.001 U	0.001 U
1,2-Dichlorobenzene	mg/L	0.001 U	0.001 U
1,2-Dichloroethane	mg/L	0.001 U	0.001 U
1,2-Dichloropropane	mg/L	0.001 U	0.001 U
1,3-Dichlorobenzene	mg/L	0.001 U	0.001 U
1,4-Dichlorobenzene	mg/L	0.001 U	0.001 U
2-Butanone (Methyl ethyl ketone) (MEK)	mg/L	0.01 U	0.00066 J
2-Hexanone	mg/L	0.01 U	0.01 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	mg/L	0.01 U	0.01 U
Acetone	mg/L	0.01 U	0.01 U
Benzene	mg/L	0.001 U	0.001 U
Bromodichloromethane	mg/L	0.001 U	0.001 U
Bromoform	mg/L	0.001 U	0.001 U
Bromomethane (Methyl bromide)	mg/L	0.001 U	0.001 U
Carbon disulfide	mg/L	0.005 U	0.005 U
Carbon tetrachloride	mg/L	0.001 U	0.001 U
Chlorobenzene	mg/L	0.001 U	0.001 U
Chloroethane	mg/L	0.001 U	0.001 U
Chloroform (Trichloromethane)	mg/L	0.001 U	0.001 U
Chloromethane (Methyl chloride)	mg/L	0.001 U	0.001 U
cis-1,2-Dichloroethene	mg/L	0.001 U	0.001 U
cis-1,3-Dichloropropene	mg/L	0.001 U	0.001 U
Cyclohexane	mg/L	0.001 U	0.001 U
Dibromochloromethane	mg/L	0.001 U	0.001 U
Dichlorodifluoromethane (CFC-12)	mg/L	0.001 U	0.001 U
Ethylbenzene	mg/L	0.001 U	0.001 U
Isopropyl benzene	mg/L	0.001 U	0.001 U
Methyl acetate	mg/L	0.01 U	0.01 U
Methyl cyclohexane	mg/L	0.001 U	0.001 U
Methyl tert butyl ether (MTBE)	mg/L	0.001 U	0.005 U
Methylene chloride	mg/L	0.005 U	0.005 U
Styrene	mg/L	0.001 U	0.001 U
Tetrachloroethene	mg/L	0.001 U	0.001 U
Toluene	mg/L	0.001 U	0.001 U
trans-1,2-Dichloroethene	mg/L	0.001 U	0.001 U
trans-1,3-Dichloropropene	mg/L	0.001 U	0.001 U
Trichloroethene	mg/L	0.001 U	0.001 U
Trichlorofluoromethane (CFC-11)	mg/L	0.001 U	0.001 U
Trifluorotrichloroethane (Freon 113)	mg/L	0.001 U	0.001 U
Vinyl chloride	mg/L	0.001 U	0.001 U
Xylenes (total)	mg/L	0.002 U	0.002 U

TABLE 3.9

PART 201 CRITERIA EXCEEDANCES - GROUNDWATER
2013 RFI REPORT
FORMER GENRERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation		***WEST04***	***WEST04***
Aquifier		***Shallow***	***Shallow***
Perimeter Status (1)		***Y***	***Y***
Sample Location		***CRA-605M***	***CRA-606M***
Sample Identification (GW-17358-)		***041013-DR-073***	***042412-DR-1086***
Sample Date		***4/10/2013***	***4/24/2012***
Sample Type			
Semi-Volatile Organic Compounds (SVOCs)			
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	mg/L	0.0049 U	0.0049 U
2,4,5-Trichlorophenol	mg/L	0.0049 U	0.0049 U
2,4,6-Trichlorophenol	mg/L	0.0039 U	0.0039 U
2,4-Dichlorophenol	mg/L	0.0098 U	0.0098 U
2,4-Dimethylphenol	mg/L	0.0049 U	0.0049 U
2,4-Dinitrophenol	mg/L	0.02 U	0.02 U
2,4-Dinitrotoluene	mg/L	0.0049 U	0.0049 U
2,6-Dinitrotoluene	mg/L	0.0049 U	0.0049 U
2-Chloronaphthalene	mg/L	0.0049 U	0.0049 U
2-Chlorophenol	mg/L	0.0049 U	0.0049 U
2-Methylnaphthalene	mg/L	0.0049 U	0.0049 U
2-Methylphenol	mg/L	0.0049 U	0.0049 U
2-Nitroaniline	mg/L	0.02 U	0.02 U
2-Nitrophenol	mg/L	0.0049 U	0.0049 U
3&4-Methylphenol	mg/L	0.0049 U	0.0049 U
3,3'-Dichlorobenzidine	mg/L	0.00098 U	0.00098 U
3-Nitroaniline	mg/L	0.02 U	0.02 U
4,6-Dinitro-2-methylphenol	mg/L	0.02 U	0.02 U
4-Bromophenyl phenyl ether	mg/L	0.0049 U	0.0049 U
4-Chloro-3-methylphenol	mg/L	0.0049 U	0.0049 U
4-Chloroaniline	mg/L	0.0098 U	0.0098 U
4-Chlorophenyl phenyl ether	mg/L	0.0049 U	0.0049 U
4-Nitroaniline	mg/L	0.02 U	0.02 U
4-Nitrophenol	mg/L	0.02 U	0.02 U
Acenaphthene	mg/L	0.0049 U	0.0049 U
Acenaphthylene	mg/L	0.0049 U	0.0049 U
Acetophenone	mg/L	0.0049 U	0.0049 U
Anthracene	mg/L	0.0049 U	0.0049 U
Atrazine	mg/L	0.0029 U	0.0029 U
Benzaldehyde	mg/L	0.0049 U	0.0049 U
Benzo(a)anthracene	mg/L	0.00098 U	0.00098 U
Benzo(a)pyrene	mg/L	0.00098 U	0.00098 U
Benzo(b)fluoranthene	mg/L	0.00098 U	0.00098 U
Benzo(g,h,i)perylene	mg/L	0.00098 U	0.00098 U
Benzo(k)fluoranthene	mg/L	0.00098 U	0.00098 U
Biphenyl (1,1-Biphenyl)	mg/L	0.0049 U	0.0049 U
bis(2-Chloroethoxy)methane	mg/L	0.0049 U	0.0049 U
bis(2-Chloroethyl)ether	mg/L	0.00098 U	0.00098 U
bis(2-Ethylhexyl)phthalate (DEHP)	mg/L	0.0049 U	0.001 J
Butyl benzylphthalate (BBP)	mg/L	0.0049 U	0.0049 U
Caprolactam	mg/L	0.0098 U	0.0098 U
Carbazole	mg/L	0.0098 U	0.0098 U
Chrysene	mg/L	0.00098 U	0.00098 U
Dibenz(a,h)anthracene	mg/L	0.002 U	0.002 U
Dibenzofuran	mg/L	0.0039 U	0.0039 U
Diethyl phthalate	mg/L	0.0049 U	0.0049 U
Dimethyl phthalate	mg/L	0.0049 U	0.0049 U
Di-n-butylphthalate (DBP)	mg/L	0.0049 U	0.0049 U
Di-n-octyl phthalate (DnOP)	mg/L	0.0049 U	0.0049 U
Fluoranthene	mg/L	0.00098 U	0.00098 U
Fluorene	mg/L	0.0049 U	0.0049 U
Hexachlorobenzene	mg/L	0.0002 U	0.0002 U

TABLE 3.9

PART 201 CRITERIA EXCEEDANCES - GROUNDWATER
2013 RFI REPORT
FORMER GENRERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation		***WEST04***	***WEST04***
Aquifier		***Shallow***	***Shallow***
Perimeter Status (1)		***Y***	***Y***
Sample Location		***CRA-605M***	***CRA-606M***
Sample Identification (GW-17358-)		***041013-DR-073***	***042412-DR-1086***
Sample Date		***4/10/2013***	***4/24/2012***
Sample Type			
SVOCs Continued			
Hexachlorobutadiene	mg/L	0.00098 U	0.00098 U
Hexachlorocyclopentadiene	mg/L	0.0049 U	0.0049 U
Hexachloroethane	mg/L	0.0049 U	0.0049 U
Indeno(1,2,3-cd)pyrene	mg/L	0.002 U	0.002 U
Isophorone	mg/L	0.0049 U	0.0049 U
Naphthalene	mg/L	0.0049 U	0.0049 U
Nitrobenzene	mg/L	0.0029 U	0.0029 U
N-Nitrosodi-n-propylamine	mg/L	0.0049 U	0.0049 U
N-Nitrosodiphenylamine	mg/L	0.0049 U	0.0049 U
Pentachlorophenol	mg/L	0.0049 U	0.0049 U
Phenanthrene	mg/L	0.002 U	0.002 U
Phenol	mg/L	0.0049 U	0.0049 U
Pyrene	mg/L	0.0049 U	0.0049 U
Metals			
Aluminum	mg/L	0.028 J	**0.13[ab]**
Aluminum (dissolved)	mg/L	-	-
Antimony	mg/L	0.002 U	0.00099 J
Antimony (dissolved)	mg/L	-	-
Arsenic	mg/L	0.0031 J	0.0047 J
Arsenic (dissolved)	mg/L	-	-
Barium	mg/L	0.087 J	0.061 J
Barium (dissolved)	mg/L	-	-
Beryllium	mg/L	0.001 U	0.00036 J
Beryllium (dissolved)	mg/L	-	-
Cadmium	mg/L	0.00021 J	0.00059 J
Cadmium (dissolved)	mg/L	-	-
Calcium	mg/L	-	-
Chromium	mg/L	0.01 U	0.00087 J
Chromium (dissolved)	mg/L	-	-
Chromium III (trivalent)	mg/L	-	-
Chromium VI (hexavalent)	mg/L	-	-
Cobalt	mg/L	0.00019 J	0.0013 J
Cobalt (dissolved)	mg/L	-	-
Copper	mg/L	0.004 U	0.0053
Copper (dissolved)	mg/L	-	-
Iron	mg/L	**1.4[ab]**	**2.5[ab]**
Iron (dissolved)	mg/L	-	-
Lead	mg/L	0.0005 J	0.0018 J
Lead (dissolved)	mg/L	-	-
Magnesium	mg/L	-	-
Manganese	mg/L	**0.42[ab]**	**0.25[ab]**
Manganese (dissolved)	mg/L	-	-
Mercury	mg/L	0.0002 U	0.04 U
Mercury (dissolved)	mg/L	-	-
Nickel	mg/L	0.00089 J	0.0026 J
Nickel (dissolved)	mg/L	-	-
Potassium	mg/L	-	-
Selenium	mg/L	0.005 U	0.0019 J
Selenium (dissolved)	mg/L	-	-
Silver	mg/L	0.0002 U	0.0002 U
Silver (dissolved)	mg/L	-	-
Sodium	mg/L	-	-

TABLE 3.9

PART 201 CRITERIA EXCEEDANCES - GROUNDWATER
2013 RFI REPORT
FORMER GENRERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation		***WEST04***	***WEST04***
Aquifier		***Shallow***	***Shallow***
Perimeter Status (1)		***Y***	***Y***
Sample Location		***CRA-605M***	***CRA-606M***
Sample Identification (GW-17358-)		***041013-DR-073***	***042412-DR-1086***
Sample Date		***4/10/2013***	***4/24/2012***
Sample Type			
Metals Continued			
Thallium	mg/L	0.002 U	0.0011 J
Thallium (dissolved)	mg/L	-	-
Vanadium	mg/L	0.004 U	0.0026 J
Vanadium (dissolved)	mg/L	-	-
Zinc	mg/L	0.05 U	0.042 J
Zinc (dissolved)	mg/L	-	-
Polychlorinated Biphenyls (PCBs)			
Aroclor-1016 (PCB-1016)	mg/L	0.000097 U	0.00011 U
Aroclor-1221 (PCB-1221)	mg/L	0.000097 U	0.00011 U
Aroclor-1232 (PCB-1232)	mg/L	0.000097 U	0.00011 U
Aroclor-1242 (PCB-1242)	mg/L	0.000097 U	0.00011 U
Aroclor-1248 (PCB-1248)	mg/L	0.000097 U	0.00011 U
Aroclor-1254 (PCB-1254)	mg/L	0.000097 U	0.00011 U
Aroclor-1260 (PCB-1260)	mg/L	0.000097 U	0.00011 U
Aroclor-1262 (PCB-1262)	mg/L	0.000097 U	-
Aroclor-1268 (PCB-1268)	mg/L	0.000097 U	-
Total PCBs	mg/L	ND	ND
General Chemistry			
Cyanide (amenable)	mg/L	-	-
Phosphorus	mg/L	-	-
Field Parameters			
Turbidity, field	NTU	8.47	2.68

Notes
Michigan Part 201 generic clean up criteria (updated September 28, 2012)
ID - Insufficient data to develop criterion
NLV - Hazardous substance is not likely to volatilize under most conditions
NA - Criterion or value is not available

Perimeter Status (1) - N - non-perimeter, Y - perimeter
mg/L - miligram per liter
NTU - Nephelometric Turbidity Unit

Notes:
U - Not detected at the associated reporting limit.
J - Estimated concentration.
UJ - Not detected; associated reporting limit is estimated.

TABLE 3.10

COMPARISON TO SITE SPECIFIC BACKGROUND LEVELS - SOIL
2013 RFI REPORT
FORMER GENERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation			*WEST01*	*WEST02*	*WEST02*	*WEST02*	*WEST02*	*WEST02*	*WEST02*	*WEST02*	*WEST03*
Perimeter Status (1)			*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*
Sample Location		Site	*CRA-409M-S*	*CRA-414M-S*	*CRA-422M-S*	*CRA-423M-S*	*CRA-426M-S*	*CRA-429M-D*	*CRA-429M-D*	*CRA-425M-S*	*CRA-439M-S*
Sample Identification		Background	*S-17358-020403-MM-403*	*S-17358-020303-MM-401*	*S-17358-020503-MM-410*	*S-17358-020603-MM-413*	*S-17358-020603-MM-415*	*S-17358-021203-MM-428*	*S-17358-021203-MM-429*	*S-17358-021803-MM-445*	*S-17358-022103-MM-458*
Sample Date			*2/4/2003*	*2/3/2003*	*2/5/2003*	*2/6/2003*	*2/6/2003*	*2/12/2003*	*2/12/2003*	*2/18/2003*	*2/21/2003*
Sample Depth			*(1-3) ft BGS*	*(1-3) ft BGS*	*(2-4) ft BGS*	*(6-8) ft BGS*	*(6-8) ft BGS*	*(2-4) ft BGS*	*(2-4) ft BGS*	*(3-5) ft BGS*	*(2-4) ft BGS*
Sample Type									*Duplicate*		
	Units										
Metals											
Aluminum	mg/kg	5788	5700	6040	**6920 {BC}**	2020	2680	**9120 {BC}**	**8510 {BC}**	6010	**8540 {BC}**
Antimony	mg/kg	0.089	0.56 J	0.57 UJ	0.55 UJ	0.52 UJ	0.33 J	0.53 UJ	0.58 UJ	0.55 UJ	0.57 UJ
Arsenic	mg/kg	7.26	4.3 J	5 J	2.7	2.1	1.9	**8 {BCDP}**	**11 {BCDP}**	4.9	3.8
Barium	mg/kg	25.6	64	21.5	19.8	8.2	9.4	33	32.9	36.8	39.7
Beryllium	mg/kg	0.196	0.22	0.12 J	0.16 J	0.21 U	0.21 U	0.51	0.6	0.41	0.26
Cadmium	mg/kg	0.098	0.18	0.11	0.068	0.059	0.1	0.16	0.17	0.12	0.13
Calcium	mg/kg	152444	-	-	-	-	-	-	-	-	-
Chromium	mg/kg	11.9	6.9	10.5	10.9	4.8	6.5	16.4	16	9.8 J	13.9
Chromium III (trivalent)	mg/kg	12.0	-	-	-	-	-	-	-	-	-
Chromium VI (hexavalent)	mg/kg	0.960	-	-	-	-	-	-	-	-	-
Cobalt	mg/kg	4.38	**7.5 {BCD}**	**7.8 {BCD}**	3.2	2.3	2.6	5.2	6.5	4.6	4.4
Copper	mg/kg	13.0	7.7	9.6	8.8	8.5	8.2	18.4	26.3	18.1	11.8
Iron	mg/kg	13484	10800	9330	10400	4680	5430	**15000 {BC}**	**17500 {BC}**	11700	**13700 {BC}**
Lead	mg/kg	7.14	69 J	6.2 J	5.1	3	3.1	7.6	9.6	9.4 J	6
Magnesium	mg/kg	25296	-	-	-	-	-	-	-	-	-
Manganese	mg/kg	348	**770 {BCD}**	181	105	164	109	247	373	**482 J {BCD}**	217
Mercury	mg/kg	0.05	0.11 U	0.039 J	0.022 J	0.1 UJ	0.11 UJ	0.07 J	0.063 J	0.11 U	0.11 U
Nickel	mg/kg	11.9	8	9.1	9.5	7	7.6	20.6	21.7	14.7	14.2
Potassium	mg/kg	479	-	-	-	-	-	-	-	-	-
Selenium	mg/kg	0.83	0.073 J	0.13 J	0.22 U	**0.46 {D}**	**0.88 {D}**	0.13 J	0.16 J	0.16 J	0.27
Silver	mg/kg	0.09	0.55 U	0.57 U	0.55 U	0.52 U	0.54 U	0.53 U	0.58 U	0.55 U	0.57 U
Sodium	mg/kg	88.00	-	-	-	-	-	-	-	-	-
Thallium	mg/kg	0.12	0.073 J	0.12	0.12	0.069 J	0.13	0.18	0.2	0.2	0.089 J
Vanadium	mg/kg	16.7	15.7	14.1	14.8	6.5	8.3	19.9	20.7	15.3	20.2
Zinc	mg/kg	32	22.7 J	27.5 J	19.3 J	12.7 J	16.7 J	40.6	45	30.3 J	20.4

Notes:

- Concentration exceeds generic Part 201 clean up criteria (updated September 28, 2012) and Site Specific Background Level

- Concentration exceeds generic Part 201 clean up criteria (updated September 28, 2012) but NOT Site Specific Background Level

{A,B,C … R} - Letter reference for Part 201 criteria exceeded. See Table 3.8 for definitions.

Perimeter Status (1) - N - non-perimeter, Y - perimeter

mg/kg - miligram per kilogram

U - Not detected at the associated reporting limit.

J - Estimated concentration.

UJ - Not detected; associated reporting limit is estimated.

TABLE 3.10

COMPARISON TO SITE SPECIFIC BACKGROUND LEVELS - SOIL
2013 RFI REPORT
FORMER GENERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation			*WEST03*	*WEST02*	*WEST02*	*WEST02*	*WEST02*	*WEST01*	*WEST01*	*WEST01*	*WEST02*
Perimeter Status (1)			*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*
Sample Location		Site	*CRA-450M-D*	*CRA-430M-D*	*CRA-421M-D*	*CRA-421M-D*	*CRA-413M-D*	*CRA-405M-S*	*CRA-405M-S*	*CRA-404M-S*	*CRA-412M-S*
Sample Identification		Background	*S-17358-022403-MM-463*	*S-17358-022503-MM-466*	*S-17358-022603-MM-470*	*S-17358-022603-MM-471*	*S-17358-022603-MM-469*	*S-17358-030303-MM-491*	*S-17358-030303-MM-493*	*S-17358-030303-MM-495*	*S-17358-030503-MM-500*
Sample Date			*2/24/2003*	*2/25/2003*	*2/26/2003*	*2/26/2003*	*2/26/2003*	*3/3/2003*	*3/3/2003*	*3/3/2003*	*3/5/2003*
Sample Depth			*(6-8) ft BGS*	*(2-4) ft BGS*	*(2-4) ft BGS*	*(2-4) ft BGS*	*(8-10) ft BGS*	*(2-4) ft BGS*	*(4-6) ft BGS*	*(6-8) ft BGS*	*(2-4) ft BGS*
Sample Type						*Duplicate*					
	Units										
Metals											
Aluminum	mg/kg	5788	2340	4940	6770	5880	**7960 {BC}**	4760	6780	1810	5190
Antimony	mg/kg	0.089	0.26 J	0.54 UJ	0.56 UJ	0.55 UJ	0.57 J	0.54 UJ	0.57 UJ	0.51 UJ	0.56 U
Arsenic	mg/kg	7.26	**7.1 J {BCD}**	2.2 J	**6.3 {BCD}**	5.5	3.8	5 J	2.6 J	2.1 J	3.2
Barium	mg/kg	25.6	9.9	47.8	24.1	30.5	53.5	26.5	35.4	5.5	45.7
Beryllium	mg/kg	0.196	0.075 J	0.2 J	0.18 J	0.2 J	0.28	0.13 J	0.22 J	0.21 U	0.29
Cadmium	mg/kg	0.098	0.17	0.079	0.1	0.13	0.21	0.14	0.13	0.098	0.23
Calcium	mg/kg	152444	-	-	-	-	-	-	-	-	-
Chromium	mg/kg	11.9	5.8	9.4	10.9	10.7	14.7	6.9	12.1	4	10.1
Chromium III (trivalent)	mg/kg	12.0	-	-	-	-	-	-	-	-	-
Chromium VI (hexavalent)	mg/kg	0.960	-	-	-	-	-	-	-	-	-
Cobalt	mg/kg	4.38	2.9	4.7	5.5	4.2	**8.1 {BCD}**	4.9	4	2.5	3.5
Copper	mg/kg	13.0	7.9 J	9.5 J	19.2	17.5	20.3	11.8	8.9	9.8	8.4
Iron	mg/kg	13484	7570	11100	**13800 {BC}**	**13200 {BC}**	**16800 {BC}**	9840	**12400 {BC}**	5320	11900
Lead	mg/kg	7.14	3.3 J	7.8 J	7.4	6.9	9.2	7.1	7.1	3.6	6.7
Magnesium	mg/kg	25296	-	-	-	-	-	-	-	-	-
Manganese	mg/kg	348	311 J	**529 J {BCD}**	440 J	438 J	379 J	**705 J {BCD}**	150 J	164 J	**450 {BCD}**
Mercury	mg/kg	0.05	0.021 J	0.033 J	0.06 J	0.046 J	0.028 J	0.031 J	0.047 J	0.027 J	0.11 U
Nickel	mg/kg	11.9	7.2	10.8	16.5	15.2	23.2	10	9.5	7.3	8.7
Potassium	mg/kg	479	-	-	-	-	-	-	-	-	-
Selenium	mg/kg	0.83	0.14 J	0.12 J	0.12 J	0.091 J	0.26	0.16 J	0.23	**0.47 {D}**	0.27
Silver	mg/kg	0.09	0.51 U	0.54 U	0.56 U	0.55 U	0.6 U	0.54 U	0.57 U	0.51 U	0.56 U
Sodium	mg/kg	88.00	-	-	-	-	-	-	-	-	-
Thallium	mg/kg	0.12	0.14	0.068 J	0.13	0.16	0.31	0.096 J	0.057 J	0.09 J	0.069 J
Vanadium	mg/kg	16.7	8.1	15.3	16.2	14.9	19.7	11.2	18.8	6.3	14.6
Zinc	mg/kg	32	21 J	17 J	31.2	28.5	38.6	19.3 J	26 J	14.2 J	26

Notes:

[ ] - Concentration exceeds generic Part 201 clean up criteria (updated September 28, 2012) and Site Specific Background Level

[ ] - Concentration exceeds generic Part 201 clean up criteria (updated September 28, 2012) but NOT Site Specific Background Level

{A,B,C … R} - Letter reference for Part 201 criteria exceeded. See Table 3.8 for definitions.

Perimeter Status (1) - N - non-perimeter, Y - perimeter

mg/kg - miligram per kilogram

U - Not detected at the associated reporting limit.

J - Estimated concentration.

UJ - Not detected; associated reporting limit is estimated.

TABLE 3.10

COMPARISON TO SITE SPECIFIC BACKGROUND LEVELS - SOIL
2013 RFI REPORT
FORMER GENERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation			*WEST02*	*WEST02*	*EAST01*	*NORTH PERIMETER*	*NORTH PERIMETER*	*EAST01*	*EAST01*	*NORTH PERIMETER*	*NORTH PERIMETER*
Perimeter Status (1)			*N*	*N*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*
Sample Location		Site	*CRA-416M-S*	*CRA-416M-S*	*CRA-342M*	*CRA-709M*	*CRA-709M*	*CRA-828M*	*CRA-829M*	*CRA-705M*	*CRA-705M*
Sample Identification		Background	*S-17358-030503-MM-502*	*S-17358-030503-MM-503*	*S-17358-082304-MM-715*	*SO-17358-011712-DR-005*	*SO-17358-011712-DR-006*	*SO-17358-011712-DR-003*	*SO-17358-011712-DR-002*	*SO-17358-011812-DR-009*	*SO-17358-011812-DR-010*
Sample Date			*3/5/2003*	*3/5/2003*	*8/23/2004*	*1/17/2012*	*1/17/2012*	*1/17/2012*	*1/17/2012*	*1/18/2012*	*1/18/2012*
Sample Depth			*(2-4) ft BGS*	*(4-6) ft BGS*	*(2.8-3.3) ft BGS*	*(0-2) ft BGS*	*(2-4) ft BGS*	*(0-2) ft BGS*	*(2.5-4.5) ft BGS*	*(0-2) ft BGS*	*(0-2) ft BGS*
Sample Type											*Duplicate*
	Units										
Metals											
Aluminum	mg/kg	5788	6280	4100	3240	2700	4600	4500	3100	4400	4300
Antimony	mg/kg	0.089	0.56 U	0.56 U	0.58 UJ	0.18 J	0.031 J	0.038 J	0.084 J	0.057 J	0.048 J
Arsenic	mg/kg	7.26	3.4	3.7	**7.3 {BCD}**	**5.9 {BCD}**	4.1	3.8	3.4	4.9	5.3
Barium	mg/kg	25.6	30.4	34.9	11.4	19	20	17	11	17	16
Beryllium	mg/kg	0.196	0.37	0.29	0.074 J	0.071 J	0.17 U	0.047 J	0.15 U	0.12 J	0.054 J
Cadmium	mg/kg	0.098	0.18	0.25	0.15	0.082	0.085 U	0.075 U	0.075	0.049 J	0.046 J
Calcium	mg/kg	152444	-	-	-	-	-	-	-	52000 J	38000 J
Chromium	mg/kg	11.9	14	10.6	12.1 J	6.3	9.3	10	8.5	8.7	9.8
Chromium III (trivalent)	mg/kg	12.0	-	-	-	5.5	8.9	9.5	8.1	8	9.3
Chromium VI (hexavalent)	mg/kg	0.960	-	-	-	0.76 J	0.38 J	0.74 J	0.35 J	0.63 J	0.42 J
Cobalt	mg/kg	4.38	4.1	2.9	**6.9 {BCD}**	2.2	3	3.2	3.9	2.8	3.1
Copper	mg/kg	13.0	11.1	10.6	20.7 J	8.8	4.4	8.8	15	9.6	10
Iron	mg/kg	13484	**12600 {BC}**	9220	11600	7100	10000	9100	8100	9300	10000
Lead	mg/kg	7.14	10.5	8.6 J	4.6	6.1	5.8	4.1	4.5	5.1	5.8
Magnesium	mg/kg	25296	-	-	-	-	-	-	-	**14000 {B}**	**10000 {B}**
Manganese	mg/kg	348	316	**697 {BCD}**	178 J	220 J	95 J	66 J	210 J	230 J	220 J
Mercury	mg/kg	0.05	0.11 U	0.11 U	0.12 U	0.026 J	0.016 J	0.027 J	0.02 J	0.015 J	0.044 U
Nickel	mg/kg	11.9	11.6	8 J	14.1	6.5	7.5	9	13	9.4	9.9
Potassium	mg/kg	479	-	-	-	-	-	-	-	430 J	360
Selenium	mg/kg	0.83	0.19 J	0.13 J	0.23 U	**0.44 {D}**	**0.62 {D}**	**0.71 {D}**	**0.7 {D}**	**0.67 {D}**	**0.59 {D}**
Silver	mg/kg	0.09	0.56 U	0.56 U	0.58 U	0.022 J	0.085 U	0.075 U	0.074 U	0.089 U	0.065 U
Sodium	mg/kg	88.00	-	-	-	-	-	-	-	89 U	65 U
Thallium	mg/kg	0.12	0.1 J	0.11	0.14	0.074	0.095	0.075 U	0.14	0.13	0.11
Vanadium	mg/kg	16.7	16	14.1	21.9 J	9	14	13	9.8	12	13
Zinc	mg/kg	32	25.9	20.7	26.7 J	18	**32**	19	27	26	24

Notes:

- Concentration exceeds generic Part 201 clean up criteria (updated September 28, 2012) and Site Specific Background Level

- Concentration exceeds generic Part 201 clean up criteria (updated September 28, 2012) but NOT Site Specific Background Level

{A,B,C … R} - Letter reference for Part 201 criteria exceeded. See Table 3.8 for definitions.

Perimeter Status (1) - N - non-perimeter, Y - perimeter

mg/kg - miligram per kilogram

U - Not detected at the associated reporting limit.

J - Estimated concentration.

UJ - Not detected; associated reporting limit is estimated.

TABLE 3.10

COMPARISON TO SITE SPECIFIC BACKGROUND LEVELS - SOIL
2013 RFI REPORT
FORMER GENERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation			*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*
Perimeter Status (1)			*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*
Sample Location		Site	*CRA-706M*	*CRA-707SB*	*CRA-708SB*	*CRA-710M*	*CRA-834M*	*CRA-705M*	*CRA-707SB*	*CRA-708SB*	*CRA-710M*
Sample Identification		Background	*SO-17358-011812-DR-012*	*SO-17358-011812-DR-015*	*SO-17358-011812-DR-013*	*SO-17358-011812-DR-007*	*SO-17358-011812-DR-017*	*SO-17358-011812-DR-011*	*SO-17358-011812-DR-016*	*SO-17358-011812-DR-014*	*SO-17358-011812-DR-008*
Sample Date			*1/18/2012*	*1/18/2012*	*1/18/2012*	*1/18/2012*	*1/18/2012*	*1/18/2012*	*1/18/2012*	*1/18/2012*	*1/18/2012*
Sample Depth			*(0-2) ft BGS*	*(0-2) ft BGS*	*(0-2) ft BGS*	*(0-2) ft BGS*	*(0-2) ft BGS*	*(2-3) ft BGS*	*(2-3) ft BGS*	*(2-3) ft BGS*	*(2-4) ft BGS*
Sample Type											
	Units										
Metals											
Aluminum	mg/kg	5788	3300	4300	6600	4900	3400	2400	3200	2700	2300
Antimony	mg/kg	0.089	0.067 J	0.21 J	0.042 J	0.066 J	0.07 J	0.045 J	0.081 J	0.046 J	0.12 J
Arsenic	mg/kg	7.26	4.2	4.5	**6.8 {BCD}**	**6.2 {BCD}**	3.7	3.4	**8.7 {BCDP}**	**5.9 {BCD}**	**6.8 {BCD}**
Barium	mg/kg	25.6	13	31	72	41	31	6.9	12	29	7.3
Beryllium	mg/kg	0.196	0.17 U	0.07 J	0.22	0.13 J	0.16 U	0.16 U	0.066 J	0.16 U	0.12 U
Cadmium	mg/kg	0.098	0.084 J	0.69	0.36	0.11	0.1	0.042 J	0.081 U	0.064 J	0.029 J
Calcium	mg/kg	152444	6900 J	-	-	-	-	95000 J	-	-	-
Chromium	mg/kg	11.9	7.9	14	12	9.2	9.6	8.2	8.6	5.8	6.2
Chromium III (trivalent)	mg/kg	12.0	-	13	-	8.3	-	8.2	7.9	-	5.7
Chromium VI (hexavalent)	mg/kg	0.960	-	1.9	-	0.9	-	0.87 U	0.75 J	-	0.53 J
Cobalt	mg/kg	4.38	2.9	3.9	6.3	3.6	3.3	2.3	3.2	2.4	3.2
Copper	mg/kg	13.0	6.8	26	7.8	8	18	8	9.3	5.8	9.1
Iron	mg/kg	13484	9400	**13000 {BC}**	**15000 {BC}**	11000	7700	6600	**14000 {BC}**	9900	12000
Lead	mg/kg	7.14	5.4	26	7.6	6.7	14	3.5	6	2.7	3.1
Magnesium	mg/kg	25296	2200	-	-	-	-	**14000 {B}**	-	-	-
Manganese	mg/kg	348	110 J	330 J	**600 J {BCD}**	360 J	190 J	180 J	160 J	440 J	110 J
Mercury	mg/kg	0.05	0.044 U	0.027 J	0.042	0.024 J	0.026 J	0.039 U	0.037 U	0.04 U	0.034 U
Nickel	mg/kg	11.9	8.2	13	11	8.3	8.2	7.2	7.8	10	5.9
Potassium	mg/kg	479	260 J	-	-	-	-	350 J	-	-	-
Selenium	mg/kg	0.83	**0.52 {D}**	**0.47 {D}**	**1.1 {D}**	**0.71 {D}**	**0.48 {D}**	0.37	**0.54 {D}**	0.4	**0.44 {D}**
Silver	mg/kg	0.09	0.087 U	0.022 J	0.025 J	0.018 J	0.033 J	0.08 U	0.081 U	0.081 U	0.061 U
Sodium	mg/kg	88.00	87 U	-	-	-	-	80 U	-	-	-
Thallium	mg/kg	0.12	0.12	0.1	0.1	0.082	0.088	0.079 J	0.07 J	0.091	0.061 U
Vanadium	mg/kg	16.7	13	13	19	14	9.7	8.5	17	8.8	15
Zinc	mg/kg	32	22	47	32	27	26	19	27	14	17

Notes:

- Concentration exceeds generic Part 201 clean up criteria (updated September 28, 2012) and Site Specific Background Level

- Concentration exceeds generic Part 201 clean up criteria (updated September 28, 2012) but NOT Site Specific Background Level

{A,B,C … R} - Letter reference for Part 201 criteria exceeded. See Table 3.8 for definitions.

Perimeter Status (1) - N - non-perimeter, Y - perimeter

mg/kg - miligram per kilogram

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J - Estimated concentration.

UJ - Not detected; associated reporting limit is estimated.

TABLE 3.10

COMPARISON TO SITE SPECIFIC BACKGROUND LEVELS - SOIL
2013 RFI REPORT
FORMER GENERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation			*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*EAST01*	*EAST01*	*CENTRAL03*	*CENTRAL03*	*CENTRAL01*
Perimeter Status (1)			*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*N*
Sample Location		Site	*CRA-834M*	*CRA-833M*	*CRA-835SB*	*CRA-833M*	*CRA-702SB*	*CRA-702SB*	*CRA-711I*	*CRA-711I*	*CRA-804M*
Sample Identification		Background	*SO-17358-011812-DR-018*	*SO-17358-011912-DR-021*	*SO-17358-011912-DR-020*	*SO-17358-011912-DR-022*	*SO-17358-022112-DR-039*	*SO-17358-022112-DR-040*	*SO-17358-022712-DR-043*	*SO-17358-022712-DR-044*	*SO-17358-030112-CB-100*
Sample Date			*1/18/2012*	*1/19/2012*	*1/19/2012*	*1/19/2012*	*2/21/2012*	*2/21/2012*	*2/27/2012*	*2/27/2012*	*3/1/2012*
Sample Depth			*(3-5) ft BGS*	*(0-2) ft BGS*	*(2-4) ft BGS*	*(3-5) ft BGS*	*(1-2) ft BGS*	*(2-4) ft BGS*	*(0-2) ft BGS*	*(0-2) ft BGS*	*(1-3) ft BGS*
Sample Type										*Duplicate*	
	Units										
Metals											
Aluminum	mg/kg	5788	2900	3500	4100	5300	4500	**10000 {BC}**	5900	5600	6700
Antimony	mg/kg	0.089	0.071 J	0.063 J	0.037 J	0.049 J	0.066 J	0.065 J	0.066 J	0.048 J	0.044 J
Arsenic	mg/kg	7.26	**7.7 {BCDP}**	3.7	3	**7.5 {BCD}**	4.2	2.6	**6 {BCD}**	4.1	5.4
Barium	mg/kg	25.6	47	19	16	80	38	43	57	62	42
Beryllium	mg/kg	0.196	0.07 J	0.15 U	0.16 U	0.083 J	0.2	0.2	0.33	0.26	0.27
Cadmium	mg/kg	0.098	0.15	0.075 J	0.082 U	0.079 U	0.092	0.086 U	0.22	0.16	0.28
Calcium	mg/kg	152444	-	-	-	-	110000	3000	-	-	-
Chromium	mg/kg	11.9	6.6	7.7	9.7	11	7.9	16	11	9.6	13
Chromium III (trivalent)	mg/kg	12.0	-	7.3	-	10	-	-	-	-	13
Chromium VI (hexavalent)	mg/kg	0.960	-	0.45 J	-	0.85 J	-	-	-	-	0.96 UJ
Cobalt	mg/kg	4.38	6.3	3	2.7	3.8	3.2	3.6	4.1	3.5	3.5
Copper	mg/kg	13.0	7.7	7.1	3.3	5.6	8.9	12	11	7.4	6.5
Iron	mg/kg	13484	12000	7600	8600	**16000 {BC}**	7600	11000	**14000 {BC}**	11000	**13000 {BC}**
Lead	mg/kg	7.14	4.9	5.5	4.7	5.5	5.6	7.2	6	5.3	7.1
Magnesium	mg/kg	25296	-	-	-	-	**51000 {BC}**	2100	-	-	-
Manganese	mg/kg	348	**710 J {BCD}**	180 J	59 J	300 J	380	53	**470 {BCD}**	**650 {BCD}**	150
Mercury	mg/kg	0.05	0.035 U	0.041 U	0.043 U	0.027 J	0.031 J	0.083	0.022 J	0.025 J	0.038 J
Nickel	mg/kg	11.9	9.7	7.6	7	9.4	9.7	14	11	9.1	8.1
Potassium	mg/kg	479	-	-	-	-	610	780	-	-	-
Selenium	mg/kg	0.83	**0.73 {D}**	**0.48 {D}**	**0.44 {D}**	**0.63 {D}**	0.28	**0.49 {D}**	0.39	0.25	**0.52 {D}**
Silver	mg/kg	0.09	0.078 U	0.076 U	0.082 U	0.025 J	0.023 J	0.017 J	0.022 J	0.091 U	0.026 J
Sodium	mg/kg	88.00	-	-	-	-	460	800	-	-	-
Thallium	mg/kg	0.12	0.075 J	0.11	0.13	0.083	0.15	0.11	0.086 U	0.099 U	0.094 U
Vanadium	mg/kg	16.7	17	11	13	18	12	18	18	15	17
Zinc	mg/kg	32	19	19	18	32	16	32	24	23	36

Notes:

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- Concentration exceeds generic Part 201 clean up criteria (updated September 28, 2012) but NOT Site Specific Background Level

{A,B,C … R} - Letter reference for Part 201 criteria exceeded. See Table 3.8 for definitions.

Perimeter Status (1) - N - non-perimeter, Y - perimeter

mg/kg - miligram per kilogram

U - Not detected at the associated reporting limit.

J - Estimated concentration.

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TABLE 3.10

COMPARISON TO SITE SPECIFIC BACKGROUND LEVELS - SOIL
2013 RFI REPORT
FORMER GENERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation			*CENTRAL01*	*WEST03*	*WEST03*	*EAST02*	*CENTRAL02*	*CENTRAL02*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*
Perimeter Status (1)			*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*
Sample Location		Site	*CRA-804M*	*CRA-730SB*	*CRA-787I*	*CRA-757M*	*CRA-808M*	*CRA-808M*	*CRA-792M*	*CRA-790M*	*CRA-792M*
Sample Identification		Background	*SO-17358-030112-CB-101*	*SO-17358-030112-DR-051*	*SO-17358-030212-DR-054*	*SO-17358-030512-CB-119*	*SO-17358-030512-CB-123*	*SO-17358-030512-CB-124*	*SO-17358-030612-CB-136*	*SO-17358-030612-CB-135*	*SO-17358-030612-CB-137*
Sample Date			*3/1/2012*	*3/1/2012*	*3/2/2012*	*3/5/2012*	*3/5/2012*	*3/5/2012*	*3/6/2012*	*3/6/2012*	*3/6/2012*
Sample Depth			*(1-3) ft BGS*	*(4-6) ft BGS*	*(6-8) ft BGS*	*(1-3) ft BGS*	*(1-3) ft BGS*	*(1-3) ft BGS*	*(1-3) ft BGS*	*(5-7) ft BGS*	*(5-7) ft BGS*
Sample Type			*Duplicate*					*Duplicate*			
	Units										
Metals											
Aluminum	mg/kg	5788	**7000 {BC}**	5900	2000	4800	5500	5900	6300	2800	3300
Antimony	mg/kg	0.089	0.03 J	0.053 J	0.086 J	0.042 J	0.046 J	0.034 J	0.14 J	0.065 J	0.072 J
Arsenic	mg/kg	7.26	4.1	3.3	**6.8 {BCD}**	2.5	2.9	3	5	**16 {BCDP}**	**7.2 {BCD}**
Barium	mg/kg	25.6	40	68	12	23	24	22	51	14	24
Beryllium	mg/kg	0.196	0.26	0.76	0.13	0.19	0.18	0.14 J	0.78	0.11 J	0.32
Cadmium	mg/kg	0.098	0.23	0.078 U	0.22	0.21	0.23	0.17	0.29	**0.19**	0.27
Calcium	mg/kg	152444	-	-	-	-	-	-	-	-	-
Chromium	mg/kg	11.9	12	28	6.5	9.4	8.3	8.3	17	6.7	6.3
Chromium III (trivalent)	mg/kg	12.0	12	-	6.5	9.1	8.3	7.7	16	6.4	6
Chromium VI (hexavalent)	mg/kg	0.960	0.96 UJ	-	0.83 UJ	0.38 J	0.9 U	0.67 J	0.72 J	0.29 J	0.3 J
Cobalt	mg/kg	4.38	3	2.9	3.1	2.8	**8.3 {BCD}**	**7.1 {BCD}**	5.9	2.9	3
Copper	mg/kg	13.0	5.1	8	12 J	6.8	7	5.1	12 J	5.6 J	12 J
Iron	mg/kg	13484	12000	8300	9100	7800	8300	7800	11000	**16000 {BC}**	11000
Lead	mg/kg	7.14	7.3	13	4.8	5.6	7.1	6.1	27	3.5	4.7
Magnesium	mg/kg	25296	-	-	-	-	-	-	-	-	-
Manganese	mg/kg	348	120	**970 J {BCD}**	250	110	170	120	**630 {BCD}**	290	**570 {BCD}**
Mercury	mg/kg	0.05	0.05	0.045	0.043 U	0.026 J	0.024 J	0.018 J	0.036 J	0.044 U	0.015 J
Nickel	mg/kg	11.9	7.7	7.4	9.4	7.3	7.2	6.8	13	6.8	9.9
Potassium	mg/kg	479	-	-	-	-	-	-	-	-	-
Selenium	mg/kg	0.83	**0.46 {D}**	**0.91 {D}**	0.31	**0.42 {D}**	0.3	0.24	**1.1 {D}**	0.51 {D}	**0.42 {D}**
Silver	mg/kg	0.09	0.024 J	0.033 J	0.058 U	0.017 J	0.084 U	0.085 U	0.082 U	0.079 U	0.08 U
Sodium	mg/kg	88.00	-	-	-	-	-	-	-	-	-
Thallium	mg/kg	0.12	0.089 U	0.1	0.15	0.065 J	0.052 J	0.052 J	0.13	0.082	0.15
Vanadium	mg/kg	16.7	17	12	8.2	14	14	14	17	13	11
Zinc	mg/kg	32	34	18	22	23	20	19	44	18	26

Notes:

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[ ] - Concentration exceeds generic Part 201 clean up criteria (updated September 28, 2012) but NOT Site Specific Background Level

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Perimeter Status (1) - N - non-perimeter, Y - perimeter

mg/kg - miligram per kilogram

U - Not detected at the associated reporting limit.

J - Estimated concentration.

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TABLE 3.10

COMPARISON TO SITE SPECIFIC BACKGROUND LEVELS - SOIL
2013 RFI REPORT
FORMER GENERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation			*WEST04*	*WEST04*	*EAST02*	*EAST02*	*EAST01*	*EAST02*	*CENTRAL01*	*CENTRAL01*	*CENTRAL02*
Perimeter Status (1)			*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*
Sample Location		Site	*CRA-729I*	*CRA-740I*	*CRA-759SB*	*CRA-760SB*	*CRA-767SB*	*CRA-768SB*	*CRA-796SB*	*CRA-796SB*	*CRA-815SB*
Sample Identification		Background	*SO-17358-030712-DR-055*	*SO-17358-030712-DR-057*	*SO-17358-030712-CB-157*	*SO-17358-030712-CB-155*	*SO-17358-030712-CB-149*	*SO-17358-030712-CB-151*	*SO-17358-030712-CB-142*	*SO-17358-030712-CB-143*	*SO-17358-030712-CB-159*
Sample Date			*3/7/2012*	*3/7/2012*	*3/7/2012*	*3/7/2012*	*3/7/2012*	*3/7/2012*	*3/7/2012*	*3/7/2012*	*3/7/2012*
Sample Depth			*(1-3) ft BGS*	*(1-3) ft BGS*	*(1-3) ft BGS*	*(1-3) ft BGS*	*(1-3) ft BGS*	*(1-3) ft BGS*	*(1-3) ft BGS*	*(1-3) ft BGS*	*(1-3) ft BGS*
Sample Type										*Duplicate*	
	Units										
Metals											
Aluminum	mg/kg	5788	5600	4100	2200	**9800 {BC}**	4900	3600	4700	6400	5100
Antimony	mg/kg	0.089	0.16 J	0.12 J	0.058 J	0.029 J	0.024 J	0.034 J	0.05 J	0.044 J	0.037 J
Arsenic	mg/kg	7.26	3.9	3.4	3.3	**6.9 {BCD}**	3.8	2.9	3.9	4	3.9
Barium	mg/kg	25.6	74	44	15	33	21	30	30	78	23
Beryllium	mg/kg	0.196	0.29	0.19	0.15 U	0.23	0.21	0.084 J	0.36 J	0.99 J	0.17 U
Cadmium	mg/kg	0.098	0.36	0.25	1.7	0.19	0.2	0.14	0.22	0.18	0.2
Calcium	mg/kg	152444	-	-	-	-	-	-	-	-	-
Chromium	mg/kg	11.9	160	11	6.8	18	11	7.1	10	11	11
Chromium III (trivalent)	mg/kg	12.0	-	-	6.4	-	-	-	-	-	-
Chromium VI (hexavalent)	mg/kg	0.960	-	-	0.38 J	-	-	-	-	-	-
Cobalt	mg/kg	4.38	3.8	2.9	3.8	5.1	3.3	2.7	5.2	3.6	4.4
Copper	mg/kg	13.0	21	17	26	13	9.1 J	7.9	19 J	17 J	15
Iron	mg/kg	13484	**16000 {BC}**	**13000 {BC}**	6100	**17000 {BC}**	8500	6700	9500	7800	10000
Lead	mg/kg	7.14	19	17	9.1	8.1	5.2	9.8	6.6	6.6	8.2
Magnesium	mg/kg	25296	-	-	-	-	-	-	-	-	-
Manganese	mg/kg	348	**2400 {BCDO}**	**630 {BCD}**	210	140	250	320	410	**890 {BCD}**	**1100 {BCD}**
Mercury	mg/kg	0.05	0.041 U	0.052 U	0.041 U	0.066	0.019 J	0.017 J	0.04 U	0.045 U	0.019 J
Nickel	mg/kg	11.9	11	9.7	9.4	13	9.1	7.3	11	8.9	9.9
Potassium	mg/kg	479	-	-	-	-	-	-	-	-	-
Selenium	mg/kg	0.83	**0.45 {D}**	0.36	**0.54 {D}**	**0.9 {D}**	**0.62 {D}**	**0.48 {D}**	**0.47 J {D}**	**0.8 J {D}**	0.4
Silver	mg/kg	0.09	0.018 J	0.072 U	0.073 U	0.018 J	0.08 U	0.083 U	0.078 U	0.084 U	0.086 U
Sodium	mg/kg	88.00	-	-	-	-	-	-	-	-	-
Thallium	mg/kg	0.12	0.083 U	0.41	0.097 U	0.097 U	0.072 J	0.099 U	**0.15**	0.12	0.1 U
Vanadium	mg/kg	16.7	26	11	7.9	**28**	14	9.8	14	10	15
Zinc	mg/kg	32	31	28	22	34	22	20	26	26	23

Notes:

[ ] - Concentration exceeds generic Part 201 clean up criteria (updated September 28, 2012) and Site Specific Background Level

[ ] - Concentration exceeds generic Part 201 clean up criteria (updated September 28, 2012) but NOT Site Specific Background Level

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TABLE 3.10

COMPARISON TO SITE SPECIFIC BACKGROUND LEVELS - SOIL
2013 RFI REPORT
FORMER GENERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation			*EAST01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*WEST04*	*CENTRAL01*	*WEST03*	*WEST02*	*WEST02*
Perimeter Status (1)			*N*	*N*	*N*	*N*	*N*	*N*	*Y*	*N*	*N*
Sample Location		Site	*CRA-771SB*	*CRA-796SB*	*CRA-817SB*	*CRA-819SB*	*CRA-741I*	*CRA-801M*	*CRA-725I*	*CRA-811SB*	*CRA-811SB*
Sample Identification		Background	*SO-17358-030712-CB-146*	*SO-17358-030712-CB-144*	*SO-17358-030812-CB-167*	*SO-17358-030812-CB-173*	*SO-17358-030812-DR-060*	*SO-17358-030912-CB-184*	*SO-17358-031212-DR-062*	*SO-17358-031212-CB-189*	*SO-17358-031212-CB-191*
Sample Date			*3/7/2012*	*3/7/2012*	*3/8/2012*	*3/8/2012*	*3/8/2012*	*3/9/2012*	*3/12/2012*	*3/12/2012*	*3/12/2012*
Sample Depth			*(3-5) ft BGS*	*(4-6) ft BGS*	*(1-3) ft BGS*	*(3-5) ft BGS*	*(6-8) ft BGS*	*(3-5) ft BGS*	*(0-2) ft BGS*	*(1-3) ft BGS*	*(5.5-7.5) ft BGS*
Sample Type											*Duplicate*
	Units										
Metals											
Aluminum	mg/kg	5788	2500	6700	4000	2300	3000	**7000 {BC}**	4800	5700	2500
Antimony	mg/kg	0.089	0.04 J	0.08 J	0.044 J	0.33 J	0.08 J	0.053 J	0.033 J	1.6	0.078 J
Arsenic	mg/kg	7.26	**15 {BCDP}**	4.3	3.9	**15 {BCDP}**	**6.6 {BCD}**	4.3	2.1	**95 {BCDPQ}**	2.9
Barium	mg/kg	25.6	13	80	22	12	10	29	27	29	9.9
Beryllium	mg/kg	0.196	0.18	1	0.17 U	0.14 U	0.074 J	0.16	0.16 U	0.13 J	0.15 U
Cadmium	mg/kg	0.098	**0.22**	0.3	0.13	0.76	0.13	0.073	0.078 U	0.078 U	0.063 J
Calcium	mg/kg	152444	-	-	-	-	-	-	-	-	-
Chromium	mg/kg	11.9	6.7	31	8.1	5.6	6.3	12	7.5	13	6.2
Chromium III (trivalent)	mg/kg	12.0	-	-	-	-	6.3	12	-	-	-
Chromium VI (hexavalent)	mg/kg	0.960	-	-	-	-	0.021 U	0.95 U	-	-	-
Cobalt	mg/kg	4.38	1.7	3.4	3.6	2.4	3.3	5.5	3.5	**34 {BCD}**	3.1
Copper	mg/kg	13.0	3.5 J	18 J	9.4	8.7	23	15	3.3	45	10
Iron	mg/kg	13484	**23000 {BC}**	9800	9300	11000	11000	11000	7800	**31000 {BC}**	6300
Lead	mg/kg	7.14	3.3	9.2	7.2	9.6	8.1	8.1	4.3	140	4.1
Magnesium	mg/kg	25296	-	-	-	-	-	-	-	-	-
Manganese	mg/kg	348	180	**1200 {BCD}**	210	260	210	99	**540 {BCD}**	250	270
Mercury	mg/kg	0.05	0.041 U	0.042 U	0.018 J	0.042 U	0.042 U	0.041 U	0.018 J	0.036 J	0.037 U
Nickel	mg/kg	11.9	4.2	9	8.4	6.8	12	14	6.1	64	8.6
Potassium	mg/kg	479	-	-	-	-	-	-	-	-	-
Selenium	mg/kg	0.83	0.31	0.82 {D}	**0.43 J {D}**	0.22 J	0.32 J	**0.45 J {D}**	0.3	**0.81 {D}**	**0.42 {D}**
Silver	mg/kg	0.09	0.075 U	0.12	0.083 U	0.071 U	0.076 U	0.037 J	0.078 U	0.079	0.076 U
Sodium	mg/kg	88.00	-	-	-	-	-	-	-	-	-
Thallium	mg/kg	0.12	0.029 J	0.11	0.16 U	0.071 U	0.12 U	0.23 U	0.079 U	0.13 U	0.13 U
Vanadium	mg/kg	16.7	**22**	14	13	7.4	10	17	10	18	8.7
Zinc	mg/kg	32	16	27	21	42	34	45	20	30	19

Notes:

- Concentration exceeds generic Part 201 clean up criteria (updated September 28, 2012) and Site Specific Background Level

- Concentration exceeds generic Part 201 clean up criteria (updated September 28, 2012) but NOT Site Specific Background Level

{A,B,C … R} - Letter reference for Part 201 criteria exceeded. See Table 3.8 for definitions.

Perimeter Status (1) - N - non-perimeter, Y - perimeter

mg/kg - miligram per kilogram

U - Not detected at the associated reporting limit.

J - Estimated concentration.

UJ - Not detected; associated reporting limit is estimated.

TABLE 3.10

COMPARISON TO SITE SPECIFIC BACKGROUND LEVELS - SOIL
2013 RFI REPORT
FORMER GENERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation			*WEST01*	*WEST02*	*EAST02*	*EAST01*	*NORTH PERIMETER*	*WEST01*	*WEST01*	*WEST02*	*WEST04*
Perimeter Status (1)			*N*	*N*	*N*	*Y*	*Y*	*N*	*N*	*N*	*Y*
Sample Location		Site	*CRA-812SB*	*CRA-810SB*	*CRA-766SB*	*CRA-826ML*	*CRA-703I*	*CRA-713M*	*CRA-786SB*	*CRA-721M*	*CRA-728SB*
Sample Identification		Background	*SO-17358-031212-CB-188*	*SO-17358-031212-CB-193*	*SO-17358-031412-CB-197*	*SO-17358-031412-CB-196*	*SO-17358-031412-DR-071*	*SO-17358-031512-CB-201*	*SO-17358-031512-CB-200*	*SO-17358-031912-CB-205*	*SO-17358-031912-CB-203*
Sample Date			*3/12/2012*	*3/12/2012*	*3/14/2012*	*3/14/2012*	*3/14/2012*	*3/15/2012*	*3/15/2012*	*3/19/2012*	*3/19/2012*
Sample Depth			*(6-8) ft BGS*	*(7-9) ft BGS*	*(0.5-2.5) ft BGS*	*(1-3) ft BGS*	*(4-6) ft BGS*	*(0-2) ft BGS*	*(3.5-5.5) ft BGS*	*(0-2) ft BGS*	*(0-2) ft BGS*
Sample Type											
	Units										
Metals											
Aluminum	mg/kg	5788	1800	1900	3300	4300	2500	3500	6700	4900	3400
Antimony	mg/kg	0.089	0.044 J	0.072 J	0.12 J	0.11 J	0.035 J	0.078 J	0.064 J	0.23	0.34
Arsenic	mg/kg	7.26	2	3.3	**10 {BCDP}**	**6.5 {BCD}**	2.7	3.6	4.4	**6.9 {BCD}**	**8.8 {BCDP}**
Barium	mg/kg	25.6	6.9	7.8	27	14	11	31	40	55	18
Beryllium	mg/kg	0.196	0.16 U	0.16 U	0.15 U	0.15 J	0.052 J	0.23	0.18	0.15 J	0.16 U
Cadmium	mg/kg	0.098	0.055 J	0.08	0.21	0.09 U	0.088 U	0.12	0.18	0.24	0.17
Calcium	mg/kg	152444	-	-	-	-	790	-	-	-	-
Chromium	mg/kg	11.9	4.9	4.5	14	11	7.3	10	14	10	7.5
Chromium III (trivalent)	mg/kg	12.0	-	-	14	11	-	-	-	-	7.5
Chromium VI (hexavalent)	mg/kg	0.960	-	-	0.87 U	0.92 U	-	-	-	-	0.87 U
Cobalt	mg/kg	4.38	2	2.9	4.2	3.9	2.2	2.7	3.4	**7.3 {BCD}**	4.5
Copper	mg/kg	13.0	6.7	12	35	9.7	5.3	12	9.2	15	13
Iron	mg/kg	13484	3800	6600	12000	**16000 {BC}**	5800	7300	**13000 {BC}**	12000	10000
Lead	mg/kg	7.14	2.8	**9.8**	17	5.5	3.5	15	8.1	9.2	6.6
Magnesium	mg/kg	25296	-	-	-	-	760	-	-	-	-
Manganese	mg/kg	348	130	230	240	210	140	**470 {BCD}**	180	**700 {BCD}**	340
Mercury	mg/kg	0.05	0.038 J	0.036 U	0.046 U	0.047 U	0.021 J	0.027 J	0.051	0.05 U	0.045 U
Nickel	mg/kg	11.9	5.9	8.7	12	10	6.3	8.8	8.5	15	13
Potassium	mg/kg	479	-	-	-	-	320 J	-	-	-	-
Selenium	mg/kg	0.83	**0.46 {D}**	**0.45 {D}**	0.36 J	**0.52 J {D}**	**0.42 J {D}**	0.37 J	**0.74 J {D}**	0.34 J	0.32 J
Silver	mg/kg	0.09	0.079 U	0.054 J	0.026 J	0.09 U	0.088 U	0.077 U	0.028 J	0.023 J	0.02 J
Sodium	mg/kg	88.00	-	-	-	-	88 U	-	-	-	-
Thallium	mg/kg	0.12	0.091 U	0.16 U	0.18	0.12	0.088 U	0.12	0.087 U	0.22 U	0.26
Vanadium	mg/kg	16.7	6.1	9.3	13	20	8.4	12	18	15	11
Zinc	mg/kg	32	13	16	38	23	12	20	38	29	29

Notes:

- Concentration exceeds generic Part 201 clean up criteria (updated September 28, 2012) and Site Specific Background Level

- Concentration exceeds generic Part 201 clean up criteria (updated September 28, 2012) but NOT Site Specific Background Level

{A,B,C … R} - Letter reference for Part 201 criteria exceeded. See Table 3.8 for definitions.

Perimeter Status (1) - N - non-perimeter, Y - perimeter

mg/kg - miligram per kilogram

U - Not detected at the associated reporting limit.

J - Estimated concentration.

UJ - Not detected; associated reporting limit is estimated.

TABLE 3.10

COMPARISON TO SITE SPECIFIC BACKGROUND LEVELS - SOIL
2013 RFI REPORT
FORMER GENERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation			*WEST04*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*
Perimeter Status (1)			*Y*	*Y*	*Y*	*Y*	*Y*	*N*	*Y*	*Y*	*Y*
Sample Location		Site	*CRA-742D*	*CRA-744M*	*CRA-749M*	*CRA-747SB*	*CRA-750M*	*CRA-743M*	*CRA-744M*	*CRA-749M*	*CRA-750M*
Sample Identification		Background	*SO-17358-032112-DR-080*	*SO-17358-032112-CB-218*	*SO-17358-032112-CB-223*	*SO-17358-032112-CB-221*	*SO-17358-032112-CB-228*	*SO-17358-032112-CB-216*	*SO-17358-032112-CB-220*	*SO-17358-032112-CB-224*	*SO-17358-032112-CB-229*
Sample Date			*3/21/2012*	*3/21/2012*	*3/21/2012*	*3/21/2012*	*3/21/2012*	*3/21/2012*	*3/21/2012*	*3/21/2012*	*3/21/2012*
Sample Depth			*(0-2) ft BGS*	*(0-2) ft BGS*	*(0-2) ft BGS*	*(0.5-2.5) ft BGS*	*(0.5-2.5) ft BGS*	*(1-3) ft BGS*	*(2-4) ft BGS*	*(3-5) ft BGS*	*(4-6) ft BGS*
Sample Type							*Duplicate*				
	Units										
Metals											
Aluminum	mg/kg	5788	4100	6900	2800	4300	1800	6100	5600	4200	5900
Antimony	mg/kg	0.089	0.041 J	0.067 J	0.14 J	0.027 J	0.052 J	0.37 J	0.045 J	0.034 J	0.047 J
Arsenic	mg/kg	7.26	5	4.7	**9.1 {BCDP}**	2.9	**40 J {BCDPQ}**	**11 {BCDP}**	3.1	**6.6 {BCD}**	4.4
Barium	mg/kg	25.6	27	36	31	26	9.3	99	35	42	35
Beryllium	mg/kg	0.196	0.25	0.33	0.34	0.23	0.098 J	0.92	0.3	0.24	0.22
Cadmium	mg/kg	0.098	0.17	0.13	0.26	0.16	0.11	0.3	0.18	0.15	0.048 J
Calcium	mg/kg	152444	-	-	-	-	-	-	-	-	-
Chromium	mg/kg	11.9	9.5	13	11	7.4	5	17	9.5	9.3	11
Chromium III (trivalent)	mg/kg	12.0	9.5	-	-	-	-	17	-	-	-
Chromium VI (hexavalent)	mg/kg	0.960	0.88 U	-	-	-	-	0.91 U	-	-	-
Cobalt	mg/kg	4.38	2.3	5.9	5.3	2.4	3.1	2.8	2.6	3.8	3.1
Copper	mg/kg	13.0	6.6	19	14	6.8	8.4	10	7.8	4.9	4.7
Iron	mg/kg	13484	11000	**14000 {BC}**	9400	7300	**20000 J {BC}**	13000 {BC}	8500	**13000 {BC}**	**13000 {BC}**
Lead	mg/kg	7.14	6.6	7	13	6.7	3.6	39	6.4	7.3	4.3
Magnesium	mg/kg	25296	-	-	-	-	-	-	-	-	-
Manganese	mg/kg	348	170 J	280 J	240 J	130 J	190 J	**670 J {BCD}**	210 J	280 J	81 J
Mercury	mg/kg	0.05	0.02 J	0.11 J	0.045 UJ	0.028 J	0.046 UJ	**0.36 J {D}**	0.021 J	0.036 J	0.047 UJ
Nickel	mg/kg	11.9	6.3	15	14	5.8	8.4	8.8	7.3	6.8	9
Potassium	mg/kg	479	-	-	-	-	-	-	-	-	-
Selenium	mg/kg	0.83	**0.44 {D}**	0.35	**0.9 {D}**	**0.52 {D}**	0.27	**1.1 {D}**	**0.59 {D}**	0.4	0.25
Silver	mg/kg	0.09	0.088 U	0.073 U	0.027 J	0.018 J	0.016 J	0.029 J	0.024 J	0.079 U	0.076 U
Sodium	mg/kg	88.00	-	-	-	-	-	-	-	-	-
Thallium	mg/kg	0.12	0.088 U	0.16	0.16	0.071 U	0.1 U	0.3	0.073 U	0.079 U	0.076 U
Vanadium	mg/kg	16.7	16	21	8.8	12	7.7	13	13	17	17
Zinc	mg/kg	32	23	31	38	22	18	26	25	23	26

Notes:

- Concentration exceeds generic Part 201 clean up criteria (updated September 28, 2012) and Site Specific Background Level

- Concentration exceeds generic Part 201 clean up criteria (updated September 28, 2012) but NOT Site Specific Background Level

{A,B,C … R} - Letter reference for Part 201 criteria exceeded. See Table 3.8 for definitions.

Perimeter Status (1) - N - non-perimeter, Y - perimeter

mg/kg - miligram per kilogram

U - Not detected at the associated reporting limit.

J - Estimated concentration.

UJ - Not detected; associated reporting limit is estimated.

TABLE 3.10

COMPARISON TO SITE SPECIFIC BACKGROUND LEVELS - SOIL
2013 RFI REPORT
FORMER GENERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation			*CENTRAL02*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*EAST02*	*CENTRAL03*	*CENTRAL03*
Perimeter Status (1)			*N*	*Y*	*N*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*
Sample Location		Site	*CRA-791M*	*CRA-753M*	*CRA-813SB*	*CRA-745M*	*CRA-748SB*	*CRA-752M*	*CRA-785D*	*CRA-745M*	*CRA-748SB*
Sample Identification		Background	*SO-17358-032212-CB-230*	*SO-17358-032212-CB-239*	*SO-17358-032212-CB-233*	*SO-17358-032312-CB-243*	*SO-17358-032312-CB-240*	*SO-17358-032312-CB-245*	*SO-17358-032312-DR-083*	*SO-17358-032312-CB-244*	*SO-17358-032312-CB-241*
Sample Date			*3/22/2012*	*3/22/2012*	*3/22/2012*	*3/23/2012*	*3/23/2012*	*3/23/2012*	*3/23/2012*	*3/23/2012*	*3/23/2012*
Sample Depth			*(0.5-2.5) ft BGS*	*(7.5-9.5) ft BGS*	*(7.5-9.5) ft BGS*	*(0.5-2.5) ft BGS*	*(1.5-3.5) ft BGS*	*(1.5-3.5) ft BGS*	*(2.5-4.5) ft BGS*	*(5.5-7.5) ft BGS*	*(7-9) ft BGS*
Sample Type											
	Units										
Metals											
Aluminum	mg/kg	5788	4900	1600	1600	**8100 {BC}**	5800	2700	2100	1500	2000
Antimony	mg/kg	0.089	0.086 J	0.046 J	0.049 J	0.036 J	0.071 J	0.11 J	0.11 J	0.044 J	0.076 J
Arsenic	mg/kg	7.26	3.7	2	1.8	2.6	4	**250 {BCDPQ}**	**16 {BCDP}**	1.6	3.4
Barium	mg/kg	25.6	36	5.8	5.6	33	51	27	67	4.8	6.1
Beryllium	mg/kg	0.196	0.49	0.074 J	0.075 J	1.2	0.3	0.22	0.13 J	0.09 J	0.11 J
Cadmium	mg/kg	0.098	1.5	0.15	0.075 J	0.25	0.2	0.5 U	0.17	0.075 J	0.1
Calcium	mg/kg	152444	-	-	-	-	-	-	-	-	-
Chromium	mg/kg	11.9	9.6	4.6	3.6	12	9.3	9.8	4.8	3.8	5.2
Chromium III (trivalent)	mg/kg	12.0	9.6	-	-	12	-	-	4.8	3.8	-
Chromium VI (hexavalent)	mg/kg	0.960	0.84 U	-	-	0.88 U	-	-	0.87 U	0.88 U	-
Cobalt	mg/kg	4.38	3.4	3.4	1.8	**11 {BCD}**	3	6.8	3.5	2	2.5
Copper	mg/kg	13.0	8.1	4.5	5.9	36	9.2	63	14	4.9	12
Iron	mg/kg	13484	8400	3400	3900	9400	10000	**97000 {BC}**	11000	4200	5000
Lead	mg/kg	7.14	15	2.1	2.2	5.1	7.4	6.6	3.6	2.6	3.1
Magnesium	mg/kg	25296	-	-	-	-	-	-	-	-	-
Manganese	mg/kg	348	440	100	90	110	370	80	**810 {BCD}**	**470 {BCD}**	190
Mercury	mg/kg	0.05	0.019 J	0.047 U	0.044 U	0.041 J	0.051	0.027 J	0.015 J	0.048 U	0.016 J
Nickel	mg/kg	11.9	8.9	9.9	4.7	24	7	19	11	7.6	8.3
Potassium	mg/kg	479	-	-	-	-	-	-	-	-	-
Selenium	mg/kg	0.83	**0.5 {D}**	**0.75 {D}**	**0.73 {D}**	**1.7 {D}**	**0.68 {D}**	**13 {BCD}**	0.27	0.19	**0.5 {D}**
Silver	mg/kg	0.09	0.074 U	0.083 U	0.078 U	0.015 J	0.03 J	0.023 J	0.071 U	0.081 U	0.016 J
Sodium	mg/kg	88.00	-	-	-	-	-	-	-	-	-
Thallium	mg/kg	0.12	0.17	0.083 U	0.086 U	0.093	0.14	0.27	0.11	0.063 J	0.21
Vanadium	mg/kg	16.7	11	5.7	5.9	11	14	21	8.9	6	8.1
Zinc	mg/kg	32	22	14	14	**57**	26	51	23	13	16

Notes:

- Concentration exceeds generic Part 201 clean up criteria (updated September 28, 2012) and Site Specific Background Level

- Concentration exceeds generic Part 201 clean up criteria (updated September 28, 2012) but NOT Site Specific Background Level

{A,B,C … R} - Letter reference for Part 201 criteria exceeded. See Table 3.8 for definitions.

Perimeter Status (1) - N - non-perimeter, Y - perimeter

mg/kg - miligram per kilogram

U - Not detected at the associated reporting limit.

J - Estimated concentration.

UJ - Not detected; associated reporting limit is estimated.

TABLE 3.11

COMPARISON TO SITE SPECIFIC BACKGROUND LEVELS - GROUNDWATER
2013 RFI REPORT
FORMER GENERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation							CENTRAL01	CENTRAL01	CENTRAL01	CENTRAL01	CENTRAL01	CENTRAL01	CENTRAL01
Perimeter Status (1)							N	N	N	N	N	N	N
Sample Location						CRA-856M [1]	CRA-717I	CRA-717I	CRA-804I	CRA-804I	CRA-804I	MW-811 [2]	CRA-014R
Sample Identification						GW-17358-040513-DR-043	GW-17358-041712-DR-1048	GW-17358-041513-DR-102	GW-17358-041212-CB-1006	GW-17358-040913-EM-061	GW-17358-040913-EM-062	MW-811	E-28-RW-14
Sample Date						4/5/2013	4/17/2012	4/15/2013	4/12/2012	4/9/2013	4/9/2013	5/7/1993	10/11/2000
Sample Type											Duplicate		
		Site Specific Background Levels	Regional Site Specific Background Levels										
		Powertrain	Willow Run Creek	CVO	Fons/ Old Wayne								
	Units	~ AMSL 720 -705	~ AMSL 705 - 695		~ AMSL 705 - 690								
Metals													
Aluminum	mg/L	0.59	**2.9**	0.256	0.4	0.05 U	0.16 {AB}	0.13 J{B}	0.055 {AB}	0.05 U	0.05 U	-	-
Antimony	mg/L	0.002 U	**0.0062**	0.002 U	0.06	0.002 U	0.0002 J	0.002 U	0.002 U	0.002 U	0.002 U	-	-
Arsenic	mg/L	0.025	0.0091	0.015	**0.09**	0.001 J	0.018 {ABC}	0.015 {BC}	**0.037 [ABC]**	**0.031 [BC]**	**0.033 [BC]**	0.011 {ABC}	-
Barium	mg/L	**0.661**	0.1	0.412	0.31	0.054 J	0.45	0.46	0.38	0.33	0.31	0.14	-
Beryllium	mg/L	0.001 U	NA	0.001 U	**0.0025**	0.001 U	0.001 U	0.001 U	0.001 U	0.00044 J	0.001 U	-	0.0005 U
Cadmium	mg/L	0.001 U	0.0002	0.001 U	**0.0025**	0.001 U	0.001 U	0.001 U	0.001 U	0.00025 J	0.001 U	0.0028	0.0001 U
Calcium	mg/L	217	140	328	**532**	-	-	-	-	-	-	-	-
Chromium	mg/L	0.01 U	NA	**0.016**	0.005	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.05 U	0.0016
Chromium III (trivalent)	mg/L	0.01 U	--	**0.016**	--	-	0.01 U	-	-	-	-	-	-
Chromium VI (hexavalent)	mg/L	**0.01 U**	--	0.010 U	--	-	0.0024 J	-	-	-	-	-	-
Cobalt	mg/L	0.02 U	NA	0.007 U	**0.025**	0.0023 J	0.00032 J	0.00043 J	0.02 U	0.00038 J	0.00021 J	-	-
Copper	mg/L	0.010	**0.014**	0.0029 U	0.0125	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.025 U	0.0092
Iron	mg/L	9.59	3.6	13.1	**50**	0.2 U	1.5 {AB}	0.9 {B}	3.9 {AB}	3.7 {B}	3.9 {B}	-	-
Lead	mg/L	0.006	0.0078	0.003 U	**0.009**	0.003 U	0.0005 J	0.00041 J	0.003 U	0.0019 J	0.00022 J	**0.007 {AB}**	**0.008 {AB}**
Magnesium	mg/L	53.9	25	**174**	123	-	-	-	-	-	-	-	-
Manganese	mg/L	0.701	0.87	**2.76**	2	0.18 {AB}	0.13 {AB}	0.089 {B}	0.15 {AB}	0.097 {B}	0.095 {B}	-	-
Mercury	mg/L	**0.04 U**	--	0.0002 U	0.00052	0.0002 U	0.04 U	0.0002 U	0.04 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Nickel	mg/L	0.011	--	0.02 U	**0.061**	0.0025 J	0.0014 J	0.02 J	0.02 U	0.00075 J	0.0005 J	-	0.051
Potassium	mg/L	3.73	6.4	**102**	43	-	-	-	-	-	-	-	-
Selenium	mg/L	**0.005 U**	--	0.005 U	0.0015	0.0057 [C]	0.005 U	0.005 U	0.005 U	0.00062 J	0.005 U	0.005 U	-
Silver	mg/L	0.0002 U	0.00025	0.0002 U	**0.005**	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	**0.001 {C}**	0.0002 U
Sodium	mg/L	390	170	**2666**	874	-	-	-	-	-	-	-	-
Thallium	mg/L	0.002 U	--	0.001 U	**0.0038**	0.002 U	0.002 U	0.002 U	0.002 U	0.0014 J	0.00058 J	-	-
Vanadium	mg/L	0.014	0.01	0.004 U	**0.025**	0.004 U	0.00044 J	0.00053 J	0.004 U	0.004 U	0.004 U	-	-
Zinc	mg/L	0.05 U	0.046	0.02 U	**0.10**	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.06	0.013

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COMPARISON TO SITE SPECIFIC BACKGROUND LEVELS - GROUNDWATER
2013 RFI REPORT
FORMER GENERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation		*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*
Perimeter Status (1)		*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*
Sample Location		*CRA-071M*	*CRA-071M*	*CRA-071M*	*CRA-071M*	*CRA-071M*	*CRA-072M*	*CRA-072M*	*CRA-073M*	*CRA-073M*	*CRA-073M*
Sample Identification		*WG-17358-011907-JJ-023*	*GW-17358-032508-LJ-025*	*GW-17358-091710-JY-048*	*GW-17358-041612-DR-1020*	*GW-17358-040913-JY-059*	*GW-17358-041612-DR-1021*	*GW-17358-040813-DR-052*	*WG-17358-011907-EV-024*	*GW-17358-032508-LJ-023*	*GW-17358-091710-JY-047*
Sample Date		*1/19/2007*	*3/25/2008*	*9/17/2010*	*4/16/2012*	*4/9/2013*	*4/16/2012*	*4/8/2013*	*1/19/2007*	*3/25/2008*	*9/17/2010*
Sample Type											
	Units										
Metals											
Aluminum	mg/L	0.0039 J	0.05 U	0.0296 J	0.024 J	0.05 U	0.05 U	0.05 U	0.0034 J	0.05 U	0.0399 J
Antimony	mg/L	0.002 U	0.002 U	0.002 U	0.0004 J	0.002 U	0.00022 J	0.002 U	0.002 U	0.002 U	0.002 U
Arsenic	mg/L	0.0105 {ABC}	**0.0356 [ABC]**	0.0073	0.019 {ABC}	0.0054	0.0022 J	0.0027 J	0.005 U	0.005 U	0.005 U
Barium	mg/L	0.296	0.409	0.237	0.26	0.23	0.23	0.22	0.228	0.159	0.318
Beryllium	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Cadmium	mg/L	0.0005 U	0.0005 U	0.0005 U	0.001 U	0.001 U	0.001 U	0.001 U	0.00027 J	0.00018 J	0.00035 J
Calcium	mg/L	-	-	-	-	-	-	-	-	-	-
Chromium	mg/L	0.005 U	0.005 U	0.005 U	0.01 U	0.01 U	0.01 U	0.01 U	0.005 U	0.005 U	0.005 U
Chromium III (trivalent)	mg/L	-	-	-	-	-	-	-	-	-	-
Chromium VI (hexavalent)	mg/L	-	-	-	-	-	-	-	-	-	-
Cobalt	mg/L	0.007 U	0.007 U	0.007 U	0.00054 J	0.00012 J	0.00057 J	0.00051 J	0.0013 J	0.007 U	0.007 U
Copper	mg/L	0.0024	0.0018 J	0.0056	0.004 U	0.00092 J	0.004 U	0.00085 J	0.0028	0.0013 J	0.0014 J
Iron	mg/L	3.44 {AB}	**12.6 [AB]**	1.58 {AB}	4.7 {AB}	1.3 {B}	0.35 {AB}	0.44 {B}	0.1 U	0.1 U	0.1 U
Lead	mg/L	0.003 U	0.003 U	0.003 U	0.001 J	0.00019 J	0.00018 J	0.003 U	0.003 U	0.003 U	0.003 U
Magnesium	mg/L	-	-	-	-	-	-	-	-	-	-
Manganese	mg/L	0.474 {AB}	0.549 {AB}	0.313 {AB}	0.41 {AB}	0.2 {B}	0.052 {AB}	0.047 J	0.638 {AB}	0.487 {AB}	**0.882 [AB]**
Mercury	mg/L	0.0002 U	0.0002 U	0.0002 U	0.04 U	0.0002 U	0.04 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Nickel	mg/L	0.0107 J	0.02 U	0.0056 J	0.0047 J	0.0029 J	0.0033 J	0.0024 J	0.0063 J	0.02 U	0.0033 J
Potassium	mg/L	-	-	-	-	-	-	-	-	-	-
Selenium	mg/L	0.002 U	0.002 U	0.002 U	0.005 U	0.005 U	0.005	0.0018 J	0.0018 J	0.0013 J	0.002 U
Silver	mg/L	0.0002 UJ	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 UJ	0.0002	0.0002 U
Sodium	mg/L	-	-	-	-	-	-	-	-	-	-
Thallium	mg/L	0.001 U	0.001 U	0.001 U	0.002 U	0.002 U	0.002 U	0.002 U	0.001 U	0.001 U	0.001 U
Vanadium	mg/L	0.004 U	0.004 U	0.004 U	0.00058 J	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U
Zinc	mg/L	0.0114 U	0.01 U	0.0029 J	0.05 U	0.05 U	0.05 U	0.05 U	0.011 U	0.01 U	0.0039 J

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TABLE 3.11

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2013 RFI REPORT
FORMER GENERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation		*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*
Perimeter Status (1)		*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*
Sample Location		*CRA-073M*	*CRA-073M*	*CRA-074M*	*CRA-074M*	*CRA-074M*	*CRA-074M*	*CRA-074M*	*CRA-074M*	*CRA-077M*	*CRA-082M*
Sample Identification		*GW-17358-041612-DR-1022*	*GW-17358-040813-DR-051*	*WG-17358-011907-DR-025*	*GW-17358-032508-DS-022*	*GW-17358-091710-JY-045*	*GW-17358-091710-JY-046*	*GW-17358-041612-DR-1023*	*GW-17358-040813-DR-050*	*WG-17358-011907-EV-027*	*WG-17358-011907-JJ-026*
Sample Date		*4/16/2012*	*4/8/2013*	*1/19/2007*	*3/25/2008*	*9/17/2010*	*9/17/2010*	*4/16/2012*	*4/8/2013*	*1/19/2007*	*1/19/2007*
Sample Type							*Duplicate*				
	Units										
Metals											
Aluminum	mg/L	0.05 U	0.05 U	0.0138 J	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.009 J	0.003 J
Antimony	mg/L	0.00019 J	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.00026 J	0.002 U	0.002 U	0.002 U
Arsenic	mg/L	0.00083 J	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.0027 J	0.0022 J	0.018 {ABC}	**0.043 {ABC}**
Barium	mg/L	0.28	0.23	0.181	0.199	0.292	0.286	0.28	0.33	0.657	0.367
Beryllium	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Cadmium	mg/L	0.00035 J	0.00021 J	0.000087 J	0.0005 U	0.0005 U	0.0005 U	0.00074 J	0.0016	0.00011 J	0.0005 U
Calcium	mg/L	-	-	-	-	-	-	-	-	-	-
Chromium	mg/L	0.01 U	0.01 U	0.005 U	0.005 U	0.005 U	0.005 U	0.01 U	0.01 U	0.005 U	0.005 U
Chromium III (trivalent)	mg/L	-	-	-	-	-	-	-	-	-	-
Chromium VI (hexavalent)	mg/L	-	-	-	-	-	-	-	-	-	-
Cobalt	mg/L	0.0013 J	0.0011 J	0.007 U	0.007 U	0.007 U	0.007 U	0.0005 J	0.02 U	0.007 U	0.007 U
Copper	mg/L	0.004 U	0.0013 J	0.0032	0.002 U	0.002 U	0.00056 J	0.004 U	0.00098 J	0.00065 J	0.0017 J
Iron	mg/L	0.2 U	0.2 U	3.62 {AB}	3.86 {AB}	4.09 {AB}	3.96 {AB}	1.5 {AB}	5.2 {B}	**14.2 {AB}**	**12.7 {AB}**
Lead	mg/L	0.00023 J	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.00027 J	0.00044 J	0.003 U	0.003 U
Magnesium	mg/L	-	-	-	-	-	-	-	-	-	-
Manganese	mg/L	0.7 {AB}	0.6 {B}	0.134 {AB}	0.141 {AB}	0.161 {AB}	0.158 {AB}	0.14 {AB}	0.18 {B}	0.634 {AB}	0.466 {AB}
Mercury	mg/L	0.04 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.04 U	0.0002 U	0.0002 U	0.0002 U
Nickel	mg/L	0.0038 J	0.0022 J	0.0051 J	0.02 U	0.0051 J	0.0042 J	0.0057 J	0.0038 J	0.0318	0.0084 J
Potassium	mg/L	-	-	-	-	-	-	-	-	-	-
Selenium	mg/L	0.00095 J	0.0012 J	0.002 U	0.002 U	0.002 U	0.002 U	0.005 U	0.005 U	0.002 U	0.002 U
Silver	mg/L	0.0002 U	0.0002 U	0.0002 UJ	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 UJ	0.0002 UJ
Sodium	mg/L	-	-	-	-	-	-	-	-	-	-
Thallium	mg/L	0.002 U	0.002 U	0.001 U	0.001 U	0.001 U	0.001 U	0.002 U	0.002 U	0.001 U	0.001 U
Vanadium	mg/L	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U
Zinc	mg/L	0.05 U	0.05 U	0.0127 U	0.01 U	0.0024 J	0.0051 J	0.05 U	0.05 U	0.0194	0.0148

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2013 RFI REPORT
FORMER GENERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation		*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*
Perimeter Status (1)		*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*
Sample Location		*CRA-082M*	*CRA-082M*	*CRA-094M*	*CRA-094M*	*CRA-094M*	*CRA-094M*	*CRA-094M*	*CRA-095M*	*CRA-096M*	*CRA-097M*	*CRA-097M*	*CRA-245R*
Sample Identification		*GW-17358-032508-DS-026*	*GW-17358-091710-JY-050*	*WG-17358-011807-DR-018*	*GW-17358-032808-DR-055*	*GW-17358-091710-JY-056*	*GW-17358-041212-CB-1007*	*GW-17358-040913-EM-065*	*WG-17358-011807-DR-017*	*263/MW-1*	*263/MW-2*	*263/MW-200 (DP OF MW-2)*	*RW-10*
Sample Date		*3/25/2008*	*9/17/2010*	*1/17/2007*	*3/28/2008*	*9/17/2010*	*4/12/2012*	*4/9/2013*	*1/17/2007*	*8/25/1992*	*8/25/1992*	*8/25/1992*	*8/21/1992*
Sample Type												*Duplicate*	
	Units												
Metals													
Aluminum	mg/L	0.0783 {AB}	0.0223 J	0.0153 J	0.05 U	0.283 {AB}	0.09 {AB}	0.022 J	0.05 U	-	-	-	-
Antimony	mg/L	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.00015 J	-	-	-	-
Arsenic	mg/L	0.0215 {ABC}	**0.0276 {ABC}**	0.0147 {ABC}	0.0153 {ABC}	0.0082	0.01	0.0068	0.0129 {ABC}	-	-	-	-
Barium	mg/L	0.304	0.408	0.21	0.156	0.161	0.16	0.19	0.0681 J	-	-	-	-
Beryllium	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	-	-	-	-
Cadmium	mg/L	0.0005 U	0.0002 J	0.0005 U	0.0005 U	0.0005 U	0.001 U	0.001 U	0.0005 U	0 U	0 U	0 U	0.000079
Calcium	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Chromium	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.01 U	0.0023 J	0.005 U	0 U	0 U	0 U	0 U
Chromium III (trivalent)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Chromium VI (hexavalent)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Cobalt	mg/L	0.007 U	0.007 U	0.007 U	0.007 U	0.007 U	0.02 U	0.00015 J	0.007 U	-	-	-	-
Copper	mg/L	0.0053	0.0011 J	0.0024	0.00078 J	0.0026	0.004 U	0.004 U	0.002 U	-	-	-	-
Iron	mg/L	**17 {AB}**	**10.1 {AB}**	5.7 {AB}	5.59 {AB}	3.49 {AB}	6.1 {AB}	5.3 {B}	**13.3 {AB}**	8.1 {AB}	**13 {AB}**	**11 {AB}**	-
Lead	mg/L	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0 U	0 U	0 U	**0.011 {AB}**
Magnesium	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Manganese	mg/L	**0.73 {AB}**	0.575 {AB}	0.266 {AB}	0.338 {AB}	0.393 {AB}	0.34 {AB}	0.3 {B}	0.319 {AB}	-	-	-	-
Mercury	mg/L	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.04 U	0.0002 U	0.0002 U	-	-	-	-
Nickel	mg/L	0.0147 J	0.0049 J	0.018 J	0.0048 J	0.0034 J	0.0047 J	0.0029 J	0.0024 J	0 U	0.024	0.024	-
Potassium	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Selenium	mg/L	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.005 U	0.005 U	0.00066 J	-	-	-	-
Silver	mg/L	0.0002 U	0.0002 U	0.0002 UJ	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 UJ	-	-	-	-
Sodium	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Thallium	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.002 U	0.002 U	0.001 U	-	-	-	-
Vanadium	mg/L	0.004 U	0.004 U	0.004 U	0.004 U	0.0016 J	0.00095 J	0.00062 J	0.004 U	-	-	-	-
Zinc	mg/L	0.01 U	0.0051 J	0.01 U	0.0024 J	0.0107	0.05 U	0.05 U	0.01 U	0 U	0.02	0.02	-

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2013 RFI REPORT
FORMER GENERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation		*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*
Perimeter Status (1)		*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*
Sample Location		*CRA-252R*	*CRA-302M*	*CRA-302M*	*CRA-302M*	*CRA-304M*	*CRA-789M*	*CRA-789M*	*CRA-790M*	*CRA-790M*	*CRA-792M*	*CRA-792M*
Sample Identification		*RW-11*	*WG-17358-011907-DR-028*	*GW-17358-032508-DS-024*	*GW-17358-091710-JY-049*	*WG-17358-011907-EV-029*	*GW-17358-031312-DR-070*	*GW-17358-040913-JY-066*	*GW-17358-041612-JY-1024*	*GW-17358-040913-JY-060*	*GW-17358-041612-JY-1025*	*GW-17358-040913-JY-058*
Sample Date		*8/21/1992*	*1/19/2007*	*3/25/2008*	*9/17/2010*	*1/19/2007*	*3/13/2012*	*4/9/2013*	*4/16/2012*	*4/9/2013*	*4/16/2012*	*4/9/2013*
Sample Type												
	Units											
Metals												
Aluminum	mg/L	-	0.0249 J	0.05 U	0.0459 J	0.0061 J	0.05 U	0.02 J	0.022 J	0.019 J	0.055 {AB}	0.05 U
Antimony	mg/L	-	0.002 U	0.002 U	0.002 U	0.002 U	0.00021 J	0.002 U	0.0002 J	0.002 U	0.0002 J	0.002 U
Arsenic	mg/L	-	0.005 U	0.005 U	0.005 U	**0.0804 {ABC}**	0.011 {ABC}	**0.025 {BC}**	0.0055	0.0083	0.0011 J	0.0012 J
Barium	mg/L	-	0.211	0.114	0.243	0.238	0.37	0.32	0.38	0.27	0.18	0.26
Beryllium	mg/L	-	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Cadmium	mg/L	0 U	0.00018 J	0.0005 U	0.0005 U	0.0005 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.00013 J
Calcium	mg/L	-	-	-	-	-	-	-	-	-	-	-
Chromium	mg/L	0 U	0.005 U	0.005 U	0.005 U	0.005 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Chromium III (trivalent)	mg/L	-	-	-	-	-	-	-	-	-	-	-
Chromium VI (hexavalent)	mg/L	-	-	-	-	-	-	-	-	-	-	-
Cobalt	mg/L	-	0.0036 J	0.007 U	0.007 U	0.0012 J	0.0023 J	0.0013 J	0.0012 J	0.00031 J	0.00063 J	0.00074 J
Copper	mg/L	-	0.0074	0.0037	0.0035	0.00088 J	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.00081 J
Iron	mg/L	-	0.0776 J	0.1 U	0.1 U	0.957 {AB}	1.7 {AB}	5.8 {B}	2.7 {AB}	3 {B}	0.2 U	0.19 J
Lead	mg/L	0.0035	0.003 U	0.003 U	0.003 U	0.0028 J	0.00029 J	0.0012 J	0.003 U	0.00037 J	0.003 U	0.00045 J
Magnesium	mg/L	-	-	-	-	-	-	-	-	-	-	-
Manganese	mg/L	-	0.49 {AB}	0.242 {AB}	**1.08 {AB}**	0.192 {AB}	0.41 {AB}	0.29 {B}	0.35 {AB}	0.19 {B}	0.19 {AB}	0.22 {B}
Mercury	mg/L	-	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.04 U	0.0002 U	0.04 U	0.0002 U	0.04 U	0.0002 U
Nickel	mg/L		0.0226	0.0174 J	0.0074 J	0.0235	0.0073 J	0.0035 J	0.0029 J	0.0015 J	0.0021 J	0.0014 J
Potassium	mg/L	-	-	-	-	-	-	-	-	-	-	-
Selenium	mg/L	-	0.00065 J	0.002 U	0.002 U	0.002 U	0.005 U	0.005 U	0.0015 J	0.0018 J	0.005 U	0.005 U
Silver	mg/L	-	0.0002 UJ	0.0002 U	0.0002 U	0.0002 UJ	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Sodium	mg/L	-	-	-	-	-	-	-	-	-	-	-
Thallium	mg/L	-	0.001 U	0.001 U	0.001 U	0.00026 J	0.002 U	0.002 U	0.002 U	0.00086 J	0.002 U	0.001 J
Vanadium	mg/L	-	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U
Zinc	mg/L	-	0.0125 U	0.01 U	0.0106	0.0152	0.0028 J	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U

Notes:

- Background Levels for Site

- Least restrictive background level for four adjacent sites

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Perimeter Status (1) - N - non-perimeter, Y - perimeter

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TABLE 3.11

COMPARISON TO SITE SPECIFIC BACKGROUND LEVELS - GROUNDWATER
2013 RFI REPORT
FORMER GENERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation		*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*
Perimeter Status (1)		*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*
Sample Location		*CRA-795M*	*CRA-795M*	*CRA-798M*	*CRA-798M*	*CRA-799M*	*CRA-799M*	*CRA-800M*	*CRA-800M*	*CRA-801M*	*CRA-801M*
Sample Identification		*GW-17358-041612-JY-1026*	*GW-17358-040813-DR-049*	*GW-17358-041612-JY-1029*	*GW-17358-040513-JY-036*	*GW-17358-041612-DR-1028*	*GW-17358-040513-JY-037*	*GW-17358-041612-DR-1027*	*GW-17358-040513-DR-041*	*GW-17358-041612-DR-1030*	*GW-17358-040513-DR-039*
Sample Date		*4/16/2012*	*4/8/2013*	*4/16/2012*	*4/5/2013*	*4/16/2012*	*4/5/2013*	*4/16/2012*	*4/5/2013*	*4/16/2012*	*4/5/2013*
Sample Type											
	Units										
Metals											
Aluminum	mg/L	0.02 J	0.024 J	0.13 {AB}	0.023 J	0.16 {AB}	0.057 {B}	0.095 {AB}	0.043 J	0.029 J	0.037 J
Antimony	mg/L	0.0003 J	0.002 U	0.00024 J	0.002 U	0.00022 J	0.002 U	0.00016 J	0.002 U	0.00024 J	0.002 U
Arsenic	mg/L	0.0028 J	0.0033 J	0.0015 J	0.00079 J	0.00098 J	0.00091 J	0.003 J	0.0026 J	0.0011 J	0.001 J
Barium	mg/L	0.49	0.27	0.27	0.12	0.17	0.056 J	0.23	0.11	0.13	0.13
Beryllium	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Cadmium	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Calcium	mg/L	-	-	-	-	-	-	-	-	-	-
Chromium	mg/L	0.01 U	0.00071 J	0.0011 J	0.00077 J	0.01 U	0.0012 J	0.01 U	0.0011 J	0.01 U	0.0013 J
Chromium III (trivalent)	mg/L	-	-	0.01 U	-	-	-	-	-	0.01 U	-
Chromium VI (hexavalent)	mg/L	-	-	0.01 U	-	-	-	-	-	0.01 U	-
Cobalt	mg/L	0.0011 J	0.00065 J	0.00087 J	0.00042 J	0.0015 J	0.00043 J	0.0017 J	0.00058 J	0.00083 J	0.00084 J
Copper	mg/L	0.004 U	0.0017 J	0.004 U	0.004 U	0.004 U	0.002 J	0.004 U	0.004 U	0.004 U	0.004 U
Iron	mg/L	1 {AB}	1.3 {B}	0.71 {AB}	0.15 J	0.075 J	0.029 J	0.58 {AB}	0.72 {B}	0.2 U	0.035 J
Lead	mg/L	0.003 U	0.003 U	0.00019 J	0.003 U	0.00023 J	0.003 U	0.00035 J	0.003 U	0.003 U	0.00025 J
Magnesium	mg/L	-	-	-	-	-	-	-	-	-	-
Manganese	mg/L	0.41 {AB}	0.32 {B}	0.59 {AB}	0.28 {B}	0.26 {AB}	0.074 {B}	**0.77 {AB}**	0.34 {B}	0.4 {AB}	0.55 {B}
Mercury	mg/L	0.04 U	0.0002 U	0.04 U	0.0002 U	0.04 U	0.0002 U	0.04 U	0.0002 U	0.04 U	0.0002 U
Nickel	mg/L	0.0024 J	0.0015 J	0.0026 J	0.0016 J	0.003 J	0.0019 J	0.0028 J	0.0017 J	0.0017 J	0.0018 J
Potassium	mg/L	-	-	-	-	-	-	-	-	-	-
Selenium	mg/L	0.005 U	0.005 U	0.0024 J	0.0027 J	0.0034 J	0.005	0.005 U	0.00093 J	0.0026 J	0.002 J
Silver	mg/L	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Sodium	mg/L	-	-	-	-	-	-	-	-	-	-
Thallium	mg/L	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
Vanadium	mg/L	0.004 U	0.004 U	0.00083 J	0.004 U	0.00087 J	0.00099 J	0.004 U	0.004 U	0.00047 J	0.004 U
Zinc	mg/L	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U

Notes:

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mg/L - miligram per liter

U - Not detected at the associated reporting limit.

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TABLE 3.11

COMPARISON TO SITE SPECIFIC BACKGROUND LEVELS - GROUNDWATER
2013 RFI REPORT
FORMER GENERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation		*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL01*	*CENTRAL02*	*CENTRAL02*	*CENTRAL02*	*CENTRAL02*	*CENTRAL02*
Perimeter Status (1)		*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*
Sample Location		*CRA-801M*	*CRA-803M*	*CRA-803M*	*CRA-804M*	*CRA-804M*	*CRA-060M*	*CRA-060M*	*CRA-060M*	*CRA-060M*	*CRA-060M*
Sample Identification		*GW-17358-040513-DR-040*	*GW-17358-041612-CB-1018*	*GW-17358-040913-EM-064*	*GW-17358-041212-CB-1005*	*GW-17358-040913-EM-063*	*WG-17358-012407-DR-059*	*GW-17358-032608-DS-028*	*GW-17358-032608-DS-029*	*GW-17358-091410-DR-015*	*GW-17358-042012-DR-1072*
Sample Date		*4/5/2013*	*4/16/2012*	*4/9/2013*	*4/12/2012*	*4/9/2013*	*1/24/2007*	*3/26/2008*	*3/26/2008*	*9/14/2010*	*4/20/2012*
Sample Type		*Duplicate*							*Duplicate*		
	Units										
Metals											
Aluminum	mg/L	0.031 J	0.049 J	0.05 U	0.039 J	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Antimony	mg/L	0.002 U	0.00015 J	0.002 U	0.002 U	0.002 U	0.00028 J	0.002 U	0.002 U	0.002 U	0.002 U
Arsenic	mg/L	0.0011 J	0.0027 J	0.0019 J	0.0082	0.0077	0.005 U	0.005 U	0.005 U	0.005 U	0.0021 J
Barium	mg/L	0.14	0.22	0.26	0.18	0.2	0.106	0.0995 J	0.0975 J	0.0969 J	0.052 J
Beryllium	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Cadmium	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.00036 J	0.00032 J	0.00032 J	0.00033 J	0.00021 J
Calcium	mg/L	-	-	-	-	-	-	-	-	-	-
Chromium	mg/L	0.001 J	0.01 U	0.01 U	0.01 U	0.01 U	0.005 U	0.005 U	0.005 U	0.005 U	0.01 U
Chromium III (trivalent)	mg/L	-	-	-	0.01 U	-	-	-	-	-	-
Chromium VI (hexavalent)	mg/L	-	-	-	0.01 U	-	-	-	-	-	-
Cobalt	mg/L	0.00088 J	0.00096 J	0.00099 J	0.0009 J	0.00039 J	0.007 U	0.007 U	0.007 U	0.007 U	0.0038 J
Copper	mg/L	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.0057	0.0034	0.0033	0.0039 U	0.0044
Iron	mg/L	0.2 U	0.5 {AB}	0.4 {B}	3.6 {AB}	3.7 {B}	0.0532 U	0.1 U	0.1 U	0.1 U	0.49 {AB}
Lead	mg/L	0.003 U	0.003 U	0.003 U	0.003 U	0.00039 J	0.003 U	0.003 U	0.003 U	0.003 U	0.00073 J
Magnesium	mg/L	-	-	-	-	-	-	-	-	-	-
Manganese	mg/L	0.57 {B}	0.38 {AB}	0.42 {B}	0.66 {AB}	**0.74 [B]**	0.305 {AB}	0.468 {AB}	0.463 {AB}	0.487 {AB}	**1.5 [AB]**
Mercury	mg/L	0.0002 U	0.04 U	0.0002 U	0.04 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.04 U
Nickel	mg/L	0.0018 J	0.0028 J	0.0024 J	**0.012 J**	0.0078 J	0.02 U	0.02 U	0.02 U	0.0112 J	0.015 J
Potassium	mg/L	-	-	-	-	-	-	-	-	-	-
Selenium	mg/L	0.0018 J	0.005 U	0.005 U	0.00076 J	0.005 U	0.0029	0.002 U	0.002 U	0.0014 J	0.0009 J
Silver	mg/L	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 UJ	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Sodium	mg/L	-	-	-	-	-	-	-	-	-	-
Thallium	mg/L	0.002 U	0.002 U	0.00018 J	0.002 U	0.00028 J	0.00023 J	0.00022 J	0.00022 J	0.001 U	0.00041 J
Vanadium	mg/L	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U
Zinc	mg/L	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.0378	0.0235	0.0223	0.0146 U	0.019 J

Notes:

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2013 RFI REPORT
FORMER GENERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation		*CENTRAL02*	*CENTRAL02*	*CENTRAL02*	*CENTRAL02*	*CENTRAL02*	*CENTRAL02*	*CENTRAL02*	*CENTRAL02*	*CENTRAL02*	*CENTRAL02*
Perimeter Status (1)		*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*
Sample Location		*CRA-060M*	*CRA-103M*	*CRA-103M*	*CRA-103M*	*CRA-105M*	*CRA-105M*	*CRA-105M*	*CRA-109M*	*CRA-109M*	*CRA-109M*
Sample Identification		*GW-17358-040513-CT-035*	*WG-17358-011807-EV-016*	*GW-17358-041312-DR-1010*	*GW-17358-041113-EM-092*	*WG-17358-011807-EV-012*	*GW-17358-032808-DS-050*	*GW-17358-091610-JY-042*	*WG-17358-011707-NRS-006*	*GW-17358-032808-EV-052*	*GW-17358-091610-JY-044*
Sample Date		*4/5/2013*	*1/17/2007*	*4/13/2012*	*4/11/2013*	*1/17/2007*	*3/28/2008*	*9/16/2010*	*1/17/2007*	*3/28/2008*	*9/16/2010*
Sample Type											
	Units										
Metals											
Aluminum	mg/L	0.05 U	0.0114 J	0.05 U	0.05 U	0.0051 J	0.05 U	0.0217 J	0.0095 J	0.05 U	0.05 U
Antimony	mg/L	0.002 U	0.002 U	0.00023 J	0.002 U	0.00022 J	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
Arsenic	mg/L	0.00085 J	0.0075	0.0051	0.0042 J	0.005 U	0.005 U	0.0037 J	**0.0863 {ABC}**	**0.0706 {ABC}**	**0.0833 {ABC}**
Barium	mg/L	0.049 J	0.104	0.21	0.18	0.096 J	0.14	0.164	0.438	0.536	0.484
Beryllium	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Cadmium	mg/L	0.001 U	0.00022 J	0.001 U	0.001 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
Calcium	mg/L	-	-	-	-	-	-	-	-	-	-
Chromium	mg/L	0.00083 J	0.005 U	0.01 U	0.01 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Chromium III (trivalent)	mg/L	-	-	-	-	-	-	-	-	-	-
Chromium VI (hexavalent)	mg/L	-	-	-	-	-	-	-	-	-	-
Cobalt	mg/L	0.003 J	0.007 U	0.00054 J	0.00051 J	0.007 U	0.007 U	0.007 U	0.007 U	0.007 U	0.007 U
Copper	mg/L	0.0029 J	0.00088 J	0.004 U	0.004 U	0.0013 J	0.002 U	0.002 U	0.002 U	0.00089 J	0.002 U
Iron	mg/L	0.2 U	**10.4 {AB}**	**11 {AB}**	**12 {B}**	4.86 {AB}	7.52 {AB}	8.44 {AB}	**13 {AB}**	6.28 {AB}	6.72 {AB}
Lead	mg/L	0.0003 J	0.003 U	0.00018 J	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U
Magnesium	mg/L	-	-	-	-	-	-	-	-	-	-
Manganese	mg/L	0.61 {B}	0.0982 {AB}	0.22 {AB}	0.21 {B}	0.108 {AB}	0.136 {AB}	0.152 {AB}	0.118 {AB}	0.058 {AB}	0.0602 {AB}
Mercury	mg/L	0.0002 U	0.0002 U	0.04 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Nickel	mg/L	0.013 J	0.0259	0.028	0.042	0.0174 J	0.0164 J	0.0287	0.0346	0.041	0.0391
Potassium	mg/L	-	-	-	-	-	-	-	-	-	-
Selenium	mg/L	0.00059 J	0.0013 J	0.005 U	0.005 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
Silver	mg/L	0.0002 U	0.0002 UJ	0.0002 U	0.0002 U	0.0002 UJ	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Sodium	mg/L	-	-	-	-	-	-	-	-	-	-
Thallium	mg/L	0.00014 J	0.001 U	0.002 U	0.002 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Vanadium	mg/L	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.00076 J
Zinc	mg/L	0.05 U	0.01 U	0.05 U	0.05 U	0.01 U	0.01 U	0.01 U	0.0159 U	0.0028 J	0.01 U

Notes:

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FORMER GENERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation		*CENTRAL02*	*CENTRAL02*	*CENTRAL02*	*CENTRAL02*	*CENTRAL02*	*CENTRAL02*	*CENTRAL02*	*CENTRAL02*	*CENTRAL02*	*CENTRAL02*
Perimeter Status (1)		*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*
Sample Location		*CRA-109M*	*CRA-109M*	*CRA-236M*	*CRA-236M*	*CRA-236M*	*CRA-248M*	*CRA-248M*	*CRA-248M*	*CRA-249M*	*CRA-267M*
Sample Identification		*GW-17358-041312-DR-1011*	*GW-17358-041613-DR-108*	*WG-17358-011707-EV-008*	*GW-17358-032808-EV-051*	*GW-17358-091610-JY-043*	*GW-17358-081704-MM-711*	*WG-17358-012507-EV-067*	*WG-17358-012507-EV-068*	*WG-17358-012507-JY-069*	*GW-17358-041712-JY-1036*
Sample Date		*4/13/2012*	*4/16/2013*	*1/17/2007*	*3/28/2008*	*9/16/2010*	*8/17/2004*	*1/25/2007*	*1/25/2007*	*1/25/2007*	*4/17/2012*
Sample Type									*Duplicate*		
	Units										
Metals											
Aluminum	mg/L	0.02 J	0.0077 J	0.0086 J	0.05 U	0.0203 J	0.05 U	0.0484 J	0.0484 J	0.027 J	0.075 {AB}
Antimony	mg/L	0.002 U	0.002 U	0.002 U	0.002 U	0.00084 J	0.002 U	0.0012 J	0.0013 J	0.0023	0.0003 J
Arsenic	mg/L	**0.044 {ABC}**	**0.027 {BC}**	**0.0279 {ABC}**	**0.0277 {ABC}**	0.0241 {ABC}	0.01 U	0.005 U	0.005 U	0.005 U	0.0018 J
Barium	mg/L	0.16	0.18	0.259	0.246	0.251	0.077 J	0.0766 J	0.0748 J	0.089 J	0.039 J
Beryllium	mg/L	0.001 U	0.00016 J	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Cadmium	mg/L	0.001 U	0.00014 J	0.00022 J	0.0002 J	0.00019 J	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.001 U
Calcium	mg/L	-	-	-	-	-	-	-	-	-	-
Chromium	mg/L	0.01 U	0.01 U	0.005 U	0.005 U	0.005 U	0.005 U	0.0085	0.0081	0.005 U	0.01 U
Chromium III (trivalent)	mg/L	-	-	-	-	-	-	-	-	-	-
Chromium VI (hexavalent)	mg/L	-	-	-	-	-	-	-	-	-	-
Cobalt	mg/L	0.0019 J	0.0015 J	0.0027 J	0.007 U	0.0032 J	0.007 U	0.007 U	0.007 U	0.007 U	0.00012 J
Copper	mg/L	0.004 U	0.004 U	0.002 U	0.0008 J	0.002 U	0.0031	0.004 U	0.0031 U	0.0031 U	0.004 U
Iron	mg/L	**15 {AB}**	**14 {B}**	9.4 {AB}	7.84 {AB}	9.28 {AB}	0.58 {AB}	0.0643 J	0.127	0.0401 J	0.54 {AB}
Lead	mg/L	0.0005 J	0.00034 J	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U
Magnesium	mg/L	-	-	-	-	-	-	-	-	-	-
Manganese	mg/L	0.13 {AB}	0.14 {B}	0.0846 {AB}	0.0744 {AB}	0.0986 {AB}	0.0022 J	0.0043 J	0.0058 J	0.0652 {AB}	0.06 {AB}
Mercury	mg/L	0.04 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.000043 J{C}	0.0002 U	0.0002 U	0.0002 U	0.04 U
Nickel	mg/L	0.032	0.027	0.0191 J	0.0149 J	0.0164 J	0.0049 J	0.0017 J	0.0017 J	0.0021 J	0.00057 J
Potassium	mg/L	-	-	-	-	-	-	-	-	-	-
Selenium	mg/L	0.005 U	0.00047 J	0.00089 J	0.002 U	0.002 U	**0.056 [ABC]**	**0.0962 [ABC]**	**0.0975 [ABC]**	**0.0107 {C}**	0.0021 J
Silver	mg/L	0.0002 U	0.000013 J	0.0002 U	0.0002 U	0.0002 U	0.0005 UJ	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Sodium	mg/L	-	-	-	-	-	-	-	-	-	-
Thallium	mg/L	0.00015 J	0.0011 J	0.001 U	0.00016 J	0.001 U	0.000052 J	0.001 U	0.001 U	0.001 U	0.002 U
Vanadium	mg/L	0.001 J	0.0011 J	0.004 U	0.004 U	0.004 U	0.007 U	0.004 U	0.004 U	0.004 U	0.004 U
Zinc	mg/L	0.05 U	0.05 U	**1.64 [C]**	**2.46 [AC]**	**2.2 [C]**	0.005 J	0.01 U	0.01 U	0.01 U	0.05 U

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TABLE 3.11

COMPARISON TO SITE SPECIFIC BACKGROUND LEVELS - GROUNDWATER
2013 RFI REPORT
FORMER GENERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation		CENTRAL02	CENTRAL02	CENTRAL02	CENTRAL02	CENTRAL02	CENTRAL02	CENTRAL02	CENTRAL02	CENTRAL02	CENTRAL02
Perimeter Status (1)		N	N	N	N	N	N	N	N	N	N
Sample Location		CRA-267M	CRA-308M	CRA-311M	CRA-311M	CRA-311M	CRA-311M	CRA-311M	CRA-311M	CRA-329M	CRA-791M
Sample Identification		GW-17358-040413-CT-031	WG-17358-011807-EV-011	WG-17358-011707-EV-007	GW-17358-032808-DS-053	GW-17358-032808-DS-054	GW-17358-091710-JY-057	GW-17358-041612-CB-1017	GW-17358-041613-DR-109	GW-17358-081804-MM-712	GW-17358-041812-CB-1053
Sample Date		4/4/2013	1/17/2007	1/17/2007	3/28/2008	3/28/2008	9/17/2010	4/16/2012	4/16/2013	8/18/2004	4/18/2012
Sample Type						Duplicate					
	Units										
Metals											
Aluminum	mg/L	0.088 {B}	0.0281 J	0.0116 J	0.05 U	0.05 U	0.05 U	0.05 U	0.0088 J	**0.6 {AB}**	0.05 U
Antimony	mg/L	0.002 U	0.0015 J	0.00035 J	0.002 U	0.002 U	0.002 U	0.00026 J	0.002 U	0.0012 J	0.002 U
Arsenic	mg/L	0.00087 J	0.005 U	0.005 U	0.005 U	0.0038 J	0.005 U	0.0023 J	0.0012 J	0.0069 J	0.0099
Barium	mg/L	0.043 J	0.171	0.0611 J	0.0586 J	0.0574 J	0.0816 J	0.064 J	0.053 J	0.028 J	0.25
Beryllium	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Cadmium	mg/L	0.001 U	0.0005 U	0.00027 J	0.00023 J	0.00021 J	0.00037 J	0.0003 J	0.00033 J	0.00019 J	0.001 U
Calcium	mg/L	-	-	-	-	-	-	-	-	-	-
Chromium	mg/L	0.01 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.01 U	0.001 J	0.0057	0.01 U
Chromium III (trivalent)	mg/L	-	-	-	-	-	-	-	-	-	-
Chromium VI (hexavalent)	mg/L	-	-	-	-	-	-	-	-	-	-
Cobalt	mg/L	0.00016 J	0.007 U	0.007 U	0.007 U	0.007 U	0.007 U	0.0016 J	0.0017 J	0.001 J	0.0068 J
Copper	mg/L	0.0019 J	0.0015 J	0.0051	0.0041	0.0034	0.0041	0.0035 J	0.004 U	0.018	0.00059 J
Iron	mg/L	0.45 {B}	0.0981 J	0.135	0.151	0.127	0.173	0.2 U	0.2 U	3.2 {AB}	6.9 {AB}
Lead	mg/L	0.0012 J	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.00026 J	**0.0082 {AB}**	0.003 U
Magnesium	mg/L	-	-	-	-	-	-	-	-	-	-
Manganese	mg/L	0.04 J	0.0851 {AB}	**0.853 {AB}**	**0.992 {AB}**	**0.976 {AB}**	**1.59 {AB}**	**1.5 {AB}**	**1.4 {B}**	0.27 {AB}	0.5 {AB}
Mercury	mg/L	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.04 U	0.0002 U	0.0002 U	0.04 U
Nickel	mg/L	0.0014 J	0.0127 J	0.0152 J	0.0105 J	0.0099 J	0.0097 J	0.0071 J	0.012 J	0.0044 J	0.0045 J
Potassium	mg/L	-	-	-	-	-	-	-	-	-	-
Selenium	mg/L	0.002 J	0.0011 J	0.00093 J	0.002 U	0.002 U	0.002 U	0.005 U	0.00024 J	0.002 U	0.005 U
Silver	mg/L	0.0002 U	0.0002 UJ	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0005 U	0.0002 U
Sodium	mg/L	-	-	-	-	-	-	-	-	-	-
Thallium	mg/L	0.00023 J	0.000082 J	0.00022 J	0.00026 J	0.00022 J	0.001 U	0.002 U	0.002 U	0.00016 J	0.002 U
Vanadium	mg/L	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.00021 J	0.0025 J	0.004 U
Zinc	mg/L	0.05 U	0.01 U	0.0107 U	0.0573 J	0.0046 J	0.0087 J	0.05 U	0.05 U	0.071	0.003 J

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COMPARISON TO SITE SPECIFIC BACKGROUND LEVELS - GROUNDWATER
2013 RFI REPORT
FORMER GENERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation		*CENTRAL02*	*CENTRAL02*	*CENTRAL02*	*CENTRAL02*	*CENTRAL02*	*CENTRAL02*	*CENTRAL02*	*CENTRAL02*	*CENTRAL02*	*CENTRAL02*	*CENTRAL02*
Perimeter Status (1)		*N*	*N*	*N*	*N*	*N*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*
Sample Location		*CRA-791M*	*CRA-805M*	*CRA-805M*	*CRA-808M*	*CRA-808M*	*CRA-140M [1]*	*CRA-140M [1]*	*CRA-140M [1]*	*CRA-140M [1]*	*CRA-140M [1]*	*CRA-263M [1]*
Sample Identification		*GW-17358-040513-CT-033*	*GW-17358-041612-CB-1016*	*GW-17358-041613-DR-110*	*GW-17358-041812-CB-1054*	*GW-17358-041113-EM-083*	*OW-4*	*GW-17358-081704-MM-700*	*WG-17358-012507-EV-066*	*GW-17358-032608-DR-032*	*GW-17358-091410-DR-017*	*GW-17358-041912-DR-1059*
Sample Date		*4/5/2013*	*4/16/2012*	*4/16/2013*	*4/18/2012*	*4/11/2013*	*2/9/1993*	*8/17/2004*	*1/25/2007*	*3/26/2008*	*9/14/2010*	*4/19/2012*
Sample Type												
	Units											
Metals												
Aluminum	mg/L	0.05 U	0.035 J	0.05 U	0.05 U	0.05 U	-	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Antimony	mg/L	0.002 U	0.002 U	0.002 U	0.00024 J	0.002 U	-	0.00023 J	0.00014 J	0.002 U	0.0003 J	0.0004 J
Arsenic	mg/L	0.014 {BC}	0.019 {ABC}	0.015 {BC}	0.0031 J	0.0035 J	-	0.01 U	0.005 U	0.005 U	0.005 U	0.0012 J
Barium	mg/L	0.22	0.14	0.16	0.088 J	0.088 J	-	0.072 J	0.105	0.0803 J	0.0744 J	0.096 J
Beryllium	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	-	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Cadmium	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0002 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.001 U
Calcium	mg/L	-	-	-	-	-	-	-	-	-	-	-
Chromium	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.00074 J	0.002	0.005 U	0.005 U	0.005 U	0.005 U	0.01 U
Chromium III (trivalent)	mg/L	-	-	-	-	-	-	-	-	-	-	-
Chromium VI (hexavalent)	mg/L	-	-	-	-	-	-	-	-	-	-	-
Cobalt	mg/L	0.0039 J	0.0022 J	0.00056 J	0.00081 J	0.00041 J	-	0.007 U	0.007 U	0.007 U	0.007 U	0.00056 J
Copper	mg/L	0.004 U	0.004 U	0.004 U	0.0011 J	0.004 U	-	0.0019 J	0.002 U	0.00058 J	0.002 U	0.002 J
Iron	mg/L	6 {B}	5.9 {AB}	6 {B}	0.51 {AB}	0.62 {B}	-	0.64 {AB}	0.205	0.1 U	0.1 U	0.2 U
Lead	mg/L	0.003 U	0.003 U	0.00017 J	0.003 U	0.003 U	0.01 {AB}	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U
Magnesium	mg/L	-	-	-	-	-	-	-	-	-	-	-
Manganese	mg/L	0.32 {B}	0.78 {AB}	0.56 {B}	0.2 {AB}	0.094 {B}	-	0.15 {AB}	0.406 {AB}	0.0334	0.0366	0.25 {AB}
Mercury	mg/L	0.0002 U	0.04 U	0.0002 U	0.04 U	0.0002 U	-	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.04 U
Nickel	mg/L	0.0028 J	0.019 J	0.0045 J	0.0036 J	0.02 U	-	0.025 U	0.0039 J	0.02 U	0.02 U	0.0019 J
Potassium	mg/L	-	-	-	-	-	-	-	-	-	-	-
Selenium	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	-	0.011 {C}	0.0143 {C}	0.0055 {C}	0.0056 {C}	0.0035 J
Silver	mg/L	0.0002 U	0.0002 U	0.000009 J	0.0002 U	0.0002 U	-	0.0005 UJ	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Sodium	mg/L	-	-	-	-	-	-	-	-	-	-	-
Thallium	mg/L	0.002 U	0.002 U	0.002 U	0.002 U	0.00033 J	-	0.000062 J	0.000032 J	0.001 U	0.001 U	0.002 U
Vanadium	mg/L	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	-	0.007 U	0.004 U	0.004 U	0.004 U	0.004 U
Zinc	mg/L	0.05 U	0.05 U	0.05 U	0.0033 J	0.05 U	-	0.013	0.0127 U	0.01 U	0.0128 U	0.05 U

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2013 RFI REPORT
FORMER GENERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation		*CENTRAL02*	*CENTRAL02*	*CENTRAL02*	*CENTRAL02*	*CENTRAL02*	*CENTRAL02*	*CENTRAL02*	*CENTRAL02*	*CENTRAL02*	*CENTRAL02*
Perimeter Status (1)		*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*
Sample Location		*CRA-263M [1]*	*CRA-326M [1]*	*CRA-326M [1]*	*CRA-326M [1]*	*CRA-326M [1]*	*CRA-326M [1]*	*CRA-327M [1]*	*CRA-327M [1]*	*CRA-327M [1]*	*CRA-327M [1]*
Sample Identification		*GW-17358-040513-JY-038*	*GW-17358-081704-MM-704*	*GW-17358-081704-MM-705*	*WG-17358-012407-JJ-061*	*GW-17358-091410-DR-018*	*GW-17358-091410-DR-019*	*GW-17358-081704-MM-706*	*WG-17358-012407-EV-060*	*GW-17358-032608-DS-034*	*GW-17358-091410-DR-025*
Sample Date		*4/5/2013*	*8/17/2004*	*8/17/2004*	*1/24/2007*	*9/14/2010*	*9/14/2010*	*8/17/2004*	*1/24/2007*	*3/26/2008*	*9/14/2010*
Sample Type				*Duplicate*			*Duplicate*				
	Units										
Metals											
Aluminum	mg/L	0.23 {AB}	0.05 U	0.05 U	0.207 {AB}	0.05 U	0.05 U	0.034 J	0.29 {AB}	0.0917 {AB}	**1.85 {AB}**
Antimony	mg/L	0.002 U	0.002 U	0.002 U	0.00015 J	0.002 U	0.002 U	0.00026 J	0.00041 J	0.002 U	0.0011 J
Arsenic	mg/L	**0.034 [ABC]**	0.0065 J	0.0069 J	0.005 U	0.005 U	0.005 U	0.01 U	0.005 U	0.005 U	0.005 U
Barium	mg/L	0.024 J	0.18	0.17	0.107	0.163	0.171	0.12	0.122	0.925	0.138
Beryllium	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Cadmium	mg/L	0.001 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.00042 J	0.0001 J	0.00034 J	0.00018 J
Calcium	mg/L	-	-	-	-	172	180	-	-	-	-
Chromium	mg/L	0.0011 J	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.0093
Chromium III (trivalent)	mg/L	-	-	-	-	-	-	-	-	-	-
Chromium VI (hexavalent)	mg/L	-	-	-	-	-	-	-	-	-	-
Cobalt	mg/L	0.00039 J	0.007 U	0.007 U	0.007 U	0.007 U	0.007 U	0.007 U	0.007 U	0.007 U	0.0023 J
Copper	mg/L	0.0028 J	0.00051 J	0.00038 J	0.01	0.002 U	0.002 U	0.0025	**0.0141**	0.0032	**0.0786 {C}**
Iron	mg/L	0.26	**20.1 {AB}**	**18.1 {AB}**	**13.3 {AB}**	**14.2 {AB}**	**14.6 {AB}**	0.87 {AB}	0.734 {AB}	0.213	6.38 {AB}
Lead	mg/L	0.003 U	0.003 U	0.003 U	0.003	0.003 U	0.003 U	0.003 U	0.0038	0.003 U	**0.037 {AB}**
Magnesium	mg/L	-	-	-	-	20.8	21.6	-	-	-	-
Manganese	mg/L	0.037 J	0.29 {AB}	0.27 {AB}	0.322 {AB}	0.504 {AB}	0.528 {AB}	0.37 {AB}	0.115 {AB}	0.395 {AB}	0.61 {AB}
Mercury	mg/L	0.0002 U	0.000041 J{C}	0.000034 J{C}	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Nickel	mg/L	0.0024 J	0.025 U	0.025 U	0.02 U	0.02 U	0.02 U	0.0025 J	0.02 U	0.02 U	0.012 J
Potassium	mg/L	-	-	-	-	-	-	-	-	-	-
Selenium	mg/L	0.0072 {C}	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.0015 J	0.002	0.002 U
Silver	mg/L	0.0002 U	0.0005 UJ	0.0005 UJ	0.0002 UJ	0.0002 U	0.0002 U	0.0005 UJ	0.0002 UJ	0.0002 U	0.0002 U
Sodium	mg/L	-	-	-	-	-	-	-	-	-	-
Thallium	mg/L	0.00086 J	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.000028 J	0.000056 J	0.00025 J	0.001 U
Vanadium	mg/L	**0.015 {A}**	0.007 U	0.007 U	0.004 U	0.004 U	0.004 U	0.007 U	0.004 U	0.004 U	0.0047 {A}
Zinc	mg/L	0.05 U	0.0083 J	0.011	0.0294	0.01 U	0.01 U	0.015	0.0271 U	0.01 U	0.111

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FORMER GENERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation		*CENTRAL02*	*CENTRAL02*	*CENTRAL02*	*CENTRAL02*	*CENTRAL02*	*CENTRAL02*	*CENTRAL02*	*CENTRAL02*	*CENTRAL03*	*CENTRAL03*
Perimeter Status (1)		*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*
Sample Location		*CRA-607M [1]*	*CRA-607M [1]*	*CRA-608M [1]*	*CRA-608M [1]*	*CRA-609M [1]*	*CRA-609M [1]*	*CRA-618M [1]*	*CRA-618M [1]*	*CRA-7111 [1]*	*CRA-7111 [1]*
Sample Identification		*GW-17358-032608-DR-036*	*GW-17358-091310-DR-008*	*GW-17358-091310-DR-009*	*GW-17358-091310-DR-010*	*GW-17358-091410-DR-013*	*GW-17358-041912-DR-1066*	*GW-17358-041912-DR-1058*	*GW-17358-040813-JY-045*	*GW-17358-041912-DR-1060*	*GW-17358-040513-DR-042*
Sample Date		*3/26/2008*	*9/13/2010*	*9/13/2010*	*9/13/2010*	*9/14/2010*	*4/19/2012*	*4/19/2012*	*4/8/2013*	*4/19/2012*	*4/5/2013*
Sample Type					*Duplicate*						
	Units										
Metals											
Aluminum	mg/L	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.12 {AB}	0.05 U	0.019 J	0.039 J	0.028 J
Antimony	mg/L	0.002 U	0.00042 J	0.002 U	0.002 U	0.002 U	0.00014 J	0.002 U	0.002 U	0.002 U	0.002 U
Arsenic	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.00052 J	0.0042 J	0.0026 J	0.018 {ABC}	**0.025 [ABC]**
Barium	mg/L	0.0467 J	0.138	0.0239 J	0.0248 J	0.076 J	0.049 J	0.13	0.12	0.084 J	0.11
Beryllium	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Cadmium	mg/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Calcium	mg/L	-	-	-	-	-	-	-	-	-	-
Chromium	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.01 U	0.01 U	0.0008 J	0.01 U	0.01 U
Chromium III (trivalent)	mg/L	-	-	-	-	-	-	-	-	-	-
Chromium VI (hexavalent)	mg/L	-	-	-	-	-	-	-	-	-	-
Cobalt	mg/L	0.007 U	0.007 U	0.007 U	0.007 U	0.007 U	0.00016 J	0.00021 J	0.00023 J	0.00028 J	0.02 U
Copper	mg/L	0.00083 J	0.0013 J	0.00051 J	0.00054 J	0.002 U	0.004 U	0.00075 J	0.00061 J	0.0008 J	0.004 U
Iron	mg/L	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.14 J	**16 [AB]**	**17 [AB]**	1.1 {AB}	1.5 {AB}
Lead	mg/L	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.0013 J	0.0016 J	0.0013 J	0.00063 J	0.0002 J
Magnesium	mg/L	-	-	-	-	-	-	-	-	-	-
Manganese	mg/L	0.0468	0.0844 {AB}	0.131 {AB}	0.112 {AB}	0.0485	0.03 J	0.54 {AB}	0.47 {AB}	0.04 J	0.029 J
Mercury	mg/L	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.04 U	0.04 U	0.0002 U	0.04 U	0.0002 U
Nickel	mg/L	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.00098 J	0.00046 J	0.0015 J	0.00083 J	0.00047 J
Potassium	mg/L	-	-	-	-	-	-	-	-	-	-
Selenium	mg/L	**0.0068 [C]**	0.0036	0.0013 J	0.0013 J	0.0024	0.0027 J	0.005 U	0.005 U	0.005 U	0.005 U
Silver	mg/L	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Sodium	mg/L	-	-	-	-	-	-	-	-	-	-
Thallium	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
Vanadium	mg/L	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.00073 J	0.004 U	0.004 U
Zinc	mg/L	0.01 U	0.0036 J	0.01 U	0.01 U	0.01 U	0.05 U	0.0031 J	0.05 U	0.0074 J	0.05 U

Notes:

- Background Levels for Site

- Least restrictive background level for four adjacent sites

- Concentration exceeds generic Part 201 clean up criteria (update September 28, 2012) and least restrictive background level for four adjacent sites

- Concentration exceeds generic Part 201 clean up criteria (updated September 28, 2012) and Site Specific Background Level

- Concentration exceeds generic Part 201 clean up criteria (updated September 28, 2012) but NOT Site Specific Background Level

{A,B,C} - Letter reference for Part 201 criteria exceeded. See Table 3.9 for definitions.

Perimeter Status (1) - N - non-perimeter, Y - perimeter

mg/L - miligram per liter

U - Not detected at the associated reporting limit.

J - Estimated concentration.

UJ - Not detected; associated reporting limit is estimated.

TABLE 3.11

COMPARISON TO SITE SPECIFIC BACKGROUND LEVELS - GROUNDWATER
2013 RFI REPORT
FORMER GENERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation		*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*
Perimeter Status (1)		*Y*	*Y*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*
Sample Location		*CRA-7841 [1]*	*CRA-7841 [1]*	*CRA-137M*	*CRA-137M*	*CRA-137M*	*CRA-137M*	*CRA-137M*	*CRA-743M*	*CRA-743M*	*CRA-755M*
Sample Identification		*GW-17358-041912-JY-1065*	*GW-17358-040413-CT-026*	*WG-17358-012507-JY-064*	*GW-17358-032608-DR-030*	*GW-17358-091410-DR-014*	*GW-17358-042012-DR-1071*	*GW-17358-040513-CT-044*	*GW-17358-041912-JY-1064*	*GW-17358-040413-CT-021*	*GW-17358-042012-DR-1073*
Sample Date		*4/19/2012*	*4/4/2013*	*1/25/2007*	*3/26/2008*	*9/14/2010*	*4/20/2012*	*4/5/2013*	*4/19/2012*	*4/4/2013*	*4/20/2012*
Sample Type											
	Units										
Metals											
Aluminum	mg/L	0.14 {AB}	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.028 J	0.45 {B}	0.05 U
Antimony	mg/L	0.00016 J	0.002 U	0.002 U	-	0.002 U	0.002 U	0.002 U	0.00033 J	0.002 U	0.00013 J
Arsenic	mg/L	0.016 {ABC}	0.018 {ABC}	0.005 U	0.005 U	0.005 U	0.0026 J	0.001 J	0.00043 J	0.00085 J	0.0017 J
Barium	mg/L	0.081 J	0.072 J	0.157	0.117	0.149	0.15	0.19	0.063 J	0.095 J	0.064 J
Beryllium	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Cadmium	mg/L	0.001 U	0.001 U	0.0016	0.0005 U	0.0005 U	0.0004 J	0.001 U	0.001 U	0.001 U	0.00047 J
Calcium	mg/L	-	-	-	-	-	-	-	-	-	-
Chromium	mg/L	0.01 U	0.01 U	0.005 U	0.005 U	0.005 U	0.01 U	0.01 U	0.01 U	0.0013 J	0.01 U
Chromium III (trivalent)	mg/L	-	-	-	-	-	-	-	0.01 U	-	0.01 U
Chromium VI (hexavalent)	mg/L	-	-	-	-	-	-	-	0.01 U	-	0.01 U
Cobalt	mg/L	0.00034 J	0.0001 J	0.007 U	0.007 U	0.007 U	0.02 U	0.00013 J	0.00048 J	0.0012 J	0.0029 J
Copper	mg/L	0.004 U	0.004 U	0.002 U	-	0.002 U	0.004 U	0.004 U	0.0018 J	0.0038 J	0.0038 J
Iron	mg/L	0.88 {AB}	1.3 {AB}	5.85 {AB}	4.06 {AB}	2.84 {AB}	7.7 {AB}	7 {B}	0.2 U	0.8 {B}	0.2 U
Lead	mg/L	0.00028 J	0.003 U	0.003 U	0.003 U	0.0023 J	0.00075 J	0.00063 J	0.003 U	0.00055 J	0.003 U
Magnesium	mg/L	-	-	-	-	-	-	-	-	-	-
Manganese	mg/L	0.074 {AB}	0.065 {AB}	0.413 {AB}	0.562 {AB}	0.482 {AB}	0.25 {AB}	0.57 {B}	0.073 {AB}	0.037 J	**2 {AB}**
Mercury	mg/L	0.04 U	0.00027 {C}	0.0002 U	0.0002 U	0.0002 U	0.04 U	0.0002 U	0.04 U	0.0002 U	0.04 U
Nickel	mg/L	0.00083 J	0.00022 J	0.0019 J	0.02 U	0.02 U	0.0012 J	0.0003 J	0.002 J	0.0046 J	0.051
Potassium	mg/L	-	-	-	-	-	-	-	-	-	-
Selenium	mg/L	0.005 U	0.005 U	0.002 U	0.002 U	0.002 U	0.005 U	0.005 U	0.0049 J	0.022 {C}	0.0037 J
Silver	mg/L	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Sodium	mg/L	-	-	-	-	-	-	-	-	-	-
Thallium	mg/L	0.002 U	0.002 U	0.001 U	0.001 U	0.001 U	0.00021 J	0.002 U	0.002 U	0.002 U	0.0003 J
Vanadium	mg/L	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.001 J	0.00077 J	0.004 U	0.0012 J	0.004 U
Zinc	mg/L	0.05 U	0.05 U	0.0113 U	0.01 U	0.01 U	0.05 U	0.05 U	0.0028 J	0.05 U	0.05 U

Notes:

- Background Levels for Site

- Least restrictive background level for four adjacent sites

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- Concentration exceeds generic Part 201 clean up criteria (updated September 28, 2012) and Site Specific Background Level

- Concentration exceeds generic Part 201 clean up criteria (updated September 28, 2012) but NOT Site Specific Background Level

{A,B,C} - Letter reference for Part 201 criteria exceeded. See Table 3.9 for definitions.

Perimeter Status (1) - N - non-perimeter, Y - perimeter

mg/L - miligram per liter

U - Not detected at the associated reporting limit.

J - Estimated concentration.

UJ - Not detected; associated reporting limit is estimated.

TABLE 3.11

COMPARISON TO SITE SPECIFIC BACKGROUND LEVELS - GROUNDWATER
2013 RFI REPORT
FORMER GENERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation		*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*
Perimeter Status (1)		*N*	*N*	*N*	*N*	*N*	*Y*	*Y*	*Y*	*Y*	*Y*
Sample Location		*CRA-755M*	*CRA-806M*	*CRA-806M*	*CRA-807M*	*CRA-807M*	*CRA-141M [1]*	*CRA-141M [1]*	*CRA-141M [1]*	*CRA-141M [1]*	*CRA-744M [1]*
Sample Identification		*GW-17358-040513-CT-034*	*GW-17358-041212-DR-1002*	*GW-17358-040813-JY-055*	*GW-17358-041812-CB-1055*	*GW-17358-040913-JY-069*	*GW-17358-081704-MM-701*	*WG-17358-012507-DR-065*	*GW-17358-032608-DR-031*	*GW-17358-091410-DR-016*	*GW-17358-041912-JY-1061*
Sample Date		*4/5/2013*	*4/12/2012*	*4/8/2013*	*4/18/2012*	*4/9/2013*	*8/17/2004*	*1/25/2007*	*3/26/2008*	*9/14/2010*	*4/19/2012*
Sample Type											
	Units										
Metals											
Aluminum	mg/L	0.05 U	0.092 {AB}	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Antimony	mg/L	0.002 U	0.00022 J	0.002 U	0.00016 J	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.00019 J
Arsenic	mg/L	0.00063 J	0.0032 J	0.005	0.0021 J	0.0013 J	0.0069 J	0.005 U	0.005 U	0.005 U	0.0015 J
Barium	mg/L	0.076 J	0.045 J	0.045 J	0.12	0.12	0.11	0.123	0.107	0.194	0.025 J
Beryllium	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Cadmium	mg/L	0.001 U	0.00015 J	0.001 U	0.001 U	0.001 U	0.0005 U	0.000093 J	0.0005 U	0.0005 U	0.001 U
Calcium	mg/L	-	-	-	-	-	-	-	-	-	-
Chromium	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.005 U	0.005 U	0.005 U	0.005 U	0.01 U
Chromium III (trivalent)	mg/L	-	-	-	0.01 U	-	-	-	-	-	-
Chromium VI (hexavalent)	mg/L	-	-	-	0.01 U	-	-	-	-	-	-
Cobalt	mg/L	0.001 J	0.0033 J	0.0031 J	0.0011 J	0.00074 J	0.0023 J	0.007 U	0.007 U	0.0021 J	0.00085 J
Copper	mg/L	0.004 U	0.0014 J	0.00049 J	0.0011 J	0.004 U	0.0039	0.0025 U	0.00053 J	0.002 U	0.00063 J
Iron	mg/L	0.2 U	0.85 {AB}	2.1 {B}	0.04 J	0.088 J	7.2 {AB}	1.2 {AB}	1.1 {AB}	2.14 {AB}	0.2 U
Lead	mg/L	0.003 U	0.00038 J	0.00025 J	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U
Magnesium	mg/L	-	-	-	-	-	-	-	-	-	-
Manganese	mg/L	0.66 {B}	**0.88 {AB}**	**0.9 {B}**	0.6 {AB}	0.45 {B}	**1 {AB}**	0.571 {AB}	0.538 {AB}	**0.93 {AB}**	0.15 {AB}
Mercury	mg/L	0.0002 U	0.04 U	0.0002 U	0.04 U	0.0002 U	0.000045 J{C}	0.0002 U	0.0002 U	0.0002 U	0.04 U
Nickel	mg/L	0.0072 J	0.053	0.069	0.0024 J	0.0017 J	0.0046 J	0.0015 J	0.02 U	0.0038 J	0.0036 J
Potassium	mg/L	-	-	-	-	-	-	-	-	-	-
Selenium	mg/L	0.0038 J	0.005 U	0.005 U	0.005 U	0.005 U	0.002 U	0.002 U	0.002 U	0.002 U	**0.0054 {C}**
Silver	mg/L	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0005 UJ	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Sodium	mg/L	-	-	-	-	-	-	-	-	-	-
Thallium	mg/L	0.00014 J	0.0003 J	0.002 U	0.002 U	0.002 U	0.0001 J	0.000059 J	0.001 U	0.001 U	0.002 U
Vanadium	mg/L	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.007 U	0.004 U	0.004 U	0.004 U	0.004 U
Zinc	mg/L	0.05 U	0.0041 J	0.05 U	0.05 U	0.05 U	0.0083 J	0.01 U	0.01 U	0.01 U	0.05 U

Notes:

- Background Levels for Site

- Least restrictive background level for four adjacent sites

- Concentration exceeds generic Part 201 clean up criteria (update September 28, 2012) and least restrictive background level for four adjacent sites

- Concentration exceeds generic Part 201 clean up criteria (updated September 28, 2012) and Site Specific Background Level

- Concentration exceeds generic Part 201 clean up criteria (updated September 28, 2012) but NOT Site Specific Background Level

{A,B,C} - Letter reference for Part 201 criteria exceeded. See Table 3.9 for definitions.

Perimeter Status (1) - N - non-perimeter, Y - perimeter

mg/L - miligram per liter

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TABLE 3.11

COMPARISON TO SITE SPECIFIC BACKGROUND LEVELS - GROUNDWATER
2013 RFI REPORT
FORMER GENERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation		*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*
Perimeter Status (1)		*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*
Sample Location		*CRA-744M [1]*	*CRA-745M [1]*	*CRA-745M [1]*	*CRA-745M [1]*	*CRA-749M [1]*	*CRA-750M [1]*	*CRA-750M [1]*	*CRA-750M [1]*	*CRA-751M [1]*	*CRA-751M [1]*
Sample Identification		*GW-17358-040313-CT-019*	*GW-17358-041912-JY-1063*	*GW-17358-040413-CT-022*	*GW-17358-040413-CT-023*	*GW-17358-041912-JY-1062*	*GW-17358-041712-JY-1031*	*GW-17358-041712-JY-1032*	*GW-17358-040413-CT-027*	*GW-17358-041712-JY-1033*	*GW-17358-040413-CT-028*
Sample Date		*4/3/2013*	*4/19/2012*	*4/4/2013*	*4/4/2013*	*4/19/2012*	*4/17/2012*	*4/17/2012*	*4/4/2013*	*4/17/2012*	*4/4/2013*
Sample Type					*Duplicate*			*Duplicate*			
	Units										
Metals											
Aluminum	mg/L	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.12 {AB}	0.19 {AB}	0.15 {AB}
Antimony	mg/L	0.002 U	0.002 U	0.002 U	0.002 U	0.00017 J	0.00034	0.00019	0.002 U	0.00014 J	0.002 U
Arsenic	mg/L	0.0015 J	0.0013 J	0.005 U	0.005 U	0.00059 J	0.0023 J	0.0021 J	0.00041 J	0.0012 J	0.00078 J
Barium	mg/L	0.019 J	0.027 J	0.031 J	0.03 J	0.054 J	0.029 J	0.028 J	0.02 J	0.037 J	0.029 J
Beryllium	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.00026 J	0.001 U	0.001 U	0.001 U	0.00036 J
Cadmium	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.00013 J	0.00014 J	0.001 U	0.001 U	0.00042 J
Calcium	mg/L	-	-	-	-	-	-	-	-	-	-
Chromium	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.00095 J
Chromium III (trivalent)	mg/L	-	0.01 U	-	-	-	-	-	-	-	-
Chromium VI (hexavalent)	mg/L	-	0.01 U	-	-	-	-	-	-	-	-
Cobalt	mg/L	0.0013 J	0.0026 J	0.0032 J	0.0029 J	0.00053 J	0.0014 J	0.0014 J	0.0011 J	0.0019 J	0.0026 J
Copper	mg/L	0.004 U	0.00059 J	0.004 U	0.004 U	0.0011 J	0.004 U	0.004 U	0.004 U	0.004 U	0.0013 J
Iron	mg/L	3.7 {AB}	2.2 {AB}	4.6 {AB}	4.5 {AB}	0.2 U	0.2 U	0.2 U	0.062 J	0.19 J	0.2 U
Lead	mg/L	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.00023 J	0.00019 J	0.00064 J
Magnesium	mg/L	-	-	-	-	-	-	-	-	-	-
Manganese	mg/L	0.52 {AB}	**1.8 {AB}**	**1.6 {AB}**	**1.5 {AB}**	0.086 {AB}	0.52 {AB}	0.51 {AB}	0.55 {AB}	**0.87 {AB}**	**1.4 {AB}**
Mercury	mg/L	0.0002 U	0.04 U	0.0002 U	0.00028 {C}	0.04 U	0.04 U	0.04 U	0.0002 U	0.04 U	0.0002 U
Nickel	mg/L	0.002 J	0.0027 J	0.0026 J	0.0023 J	0.0015 J	0.0071 J	0.0067 J	0.0044 J	0.0051 J	0.0081 J
Potassium	mg/L	-	-	-	-	-	-	-	-	-	-
Selenium	mg/L	0.0043 J	0.005 U	0.0019 J	0.0015 J	0.0017 J	0.0014 J	0.0013 J	0.00092 J	0.005 U	0.0012 J
Silver	mg/L	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Sodium	mg/L	-	-	-	-	-	-	-	-	-	-
Thallium	mg/L	0.00018 J	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.0014 J
Vanadium	mg/L	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.00055 J	0.00066 J
Zinc	mg/L	0.05 U	0.05 U	0.05 U	0.05 U	0.0025 J	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U

Notes:

- Background Levels for Site

- Least restrictive background level for four adjacent sites

- Concentration exceeds generic Part 201 clean up criteria (update September 28, 2012) and least restrictive background level for four adjacent sites

- Concentration exceeds generic Part 201 clean up criteria (updated September 28, 2012) and Site Specific Background Level

- Concentration exceeds generic Part 201 clean up criteria (updated September 28, 2012) but NOT Site Specific Background Level

{A,B,C} - Letter reference for Part 201 criteria exceeded. See Table 3.9 for definitions.

Perimeter Status (1) - N - non-perimeter, Y - perimeter

mg/L - miligram per liter

U - Not detected at the associated reporting limit.

J - Estimated concentration.

UJ - Not detected; associated reporting limit is estimated.

TABLE 3.11

COMPARISON TO SITE SPECIFIC BACKGROUND LEVELS - GROUNDWATER
2013 RFI REPORT
FORMER GENERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation		*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*CENTRAL03*	*EAST01*	*EAST01*	*EAST01*	*EAST01*	*EAST01*	*EAST01*	*EAST01*	*EAST01*
Perimeter Status (1)		*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*N*	*N*	*N*	*N*	*N*	*N*
Sample Location		*CRA-752M [1]*	*CRA-752M [1]*	*CRA-753M [1]*	*CRA-753M [1]*	*CRA-826ML [1]*	*CRA-826ML [1]*	*MW-25 [2]*	*MW-25 [2]*	*RW-31 [2]*	*RW-31 [2]*	*RW-31 [2]*	*CRA-221M [1] [2]*	*CRA-316M*
Sample Identification		*GW-17358-041712-JY-1034*	*GW-17358-040413-CT-029*	*GW-17358-041712-JY-1035*	*GW-17358-040413-CT-030*	*GW-17358-041812-EM-1049*	*GW-17358-040213-CT-013*	*ATF-MW-25*	*MW-25*	*ATF-MW-31*	*ATF-MW-31DUP*	*MW-31*	*MW-27*	*WG-17358-011807-DR-013*
Sample Date		*4/17/2012*	*4/4/2013*	*4/17/2012*	*4/4/2013*	*4/18/2012*	*4/2/2013*	*5/2/1997*	*5/2/1997*	*5/2/1997*	*5/2/1997*	*5/2/1997*	*5/2/1997*	*1/17/2007*
Sample Type											*Duplicate*			
	Units													
Metals														
Aluminum	mg/L	0.05	0.039 J	0.05 U	0.05 U	0.035 J	0.028 J	-	-	-	-	-	-	0.003 J
Antimony	mg/L	0.00026 J	0.002 U	0.00019 J	0.002 U	0.00022 J	0.002 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.00023 J
Arsenic	mg/L	0.0018 J	0.00099 J	0.0029 J	0.01	0.0052	0.0049 J	0.013 {ABC}	0.013 {ABC}	0.019 {ABC}	0.019 {ABC}	0.019 {ABC}	0.02 {ABC}	0.005 U
Barium	mg/L	0.084 J	0.07 J	0.055 J	0.05 J	0.17	0.081 J	-	-	-	-	-	-	0.0441 J
Beryllium	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.001 U
Cadmium	mg/L	0.001 U	0.00019 J	0.001 U	0.001 U	0.001 U	0.001 U	0.005 U	0.005 U	0.006 {AB}	0.011 {ABC}	0.006 {AB}	0.006 {AB}	0.00012 J
Calcium	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
Chromium	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.02 U	-	0.02 U	0.024 {C}	-	-	0.005 U
Chromium III (trivalent)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
Chromium VI (hexavalent)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
Cobalt	mg/L	0.0019 J	0.00082 J	0.00078 J	0.00036 J	0.0003 J	0.02 U	-	-	-	-	-	-	0.007 U
Copper	mg/L	0.004 U	0.00054 J	0.004 U	0.0004 J	0.004 U	0.00056 J	0.02 U	0.02 U	0.058 {C}	0.092 {C}	0.058 {C}	0.095 {C}	0.0011 J
Iron	mg/L	0.097 J	0.068 J	0.2 U	0.082 J	0.92 {AB}	1.3 {AB}	-	-	-	-	-	-	0.1 U
Lead	mg/L	0.003 U	0.00028 J	0.003 U	0.003 U	0.003 U	0.0002 J	0.04 U	0.04 U	0.053 {AB}	0.093 {ABC}	0.053 {AB}	0.04 U	0.003 U
Magnesium	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
Manganese	mg/L	0.58 {AB}	0.35 {AB}	0.21 {AB}	0.22 {AB}	0.35 {AB}	0.19 {AB}	-	-	-	-	-	-	0.0799 {AB}
Mercury	mg/L	0.04 U	0.0002 U	0.04 U	0.0002 U	0.04 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Nickel	mg/L	0.0049 J	0.0033 J	0.0038 J	0.0014 J	0.00087 J	0.00034 J	0.02 U	0.02 U	0.033	0.031	0.033	0.02 U	0.02 U
Potassium	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
Selenium	mg/L	0.00088 J	0.0017 J	0.005 U	0.005 U	0.005 U	0.005 U	0.0044	0.0044	0.0051 {C}	0.0056 {C}	0.0051 {C}	0.0047	0.0106 {C}
Silver	mg/L	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.01 U	-	0.01 U	0.01 U	-	-	0.0002 UJ
Sodium	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
Thallium	mg/L	0.002 U	0.0006 J	0.002 U	0.0003 J	0.002 U	0.002 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.00012 J
Vanadium	mg/L	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.00067 J	-	-	-	-	-	-	0.004 U
Zinc	mg/L	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.099	0.099	0.41 {C}	1.3 {C}	0.41 {C}	0.18	0.01 U

Notes:

- Background Levels for Site

- Least restrictive background level for four adjacent sites

- Concentration exceeds generic Part 201 clean up criteria (update September 28, 2012) and least restrictive background level for four adjacent sites

- Concentration exceeds generic Part 201 clean up criteria (updated September 28, 2012) and Site Specific Background Level

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{A,B,C} - Letter reference for Part 201 criteria exceeded. See Table 3.9 for definitions.

Perimeter Status (1) - N - non-perimeter, Y - perimeter

mg/L - miligram per liter

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TABLE 3.11

COMPARISON TO SITE SPECIFIC BACKGROUND LEVELS - GROUNDWATER
2013 RFI REPORT
FORMER GENERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation		*EAST01*	*EAST01*	*EAST01*	*EAST01*	*EAST01*	*EAST01*	*EAST01*	*EAST01*	*EAST01*	*EAST01*
Perimeter Status (1)		*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*
Sample Location		*CRA-316M*	*CRA-316M*	*CRA-316M*	*CRA-317M*	*CRA-317M*	*CRA-401R*	*CRA-402R*	*CRA-403R*	*CRA-775M*	*CRA-775M*
Sample Identification		*WG-17358-011807-DR-014*	*GW-17358-031808-LJ-004*	*GW-17358-091610-JY-038*	*WG-17358-011807-DR-015*	*GW-17358-031808-LJ-005*	*GW-17358-021104-MM-527*	*GW-17358-021104-MM-528*	*GW-17358-021104-MM-529*	*GW-17358-041113-EM-093*	*GW-17358-041113-EM-094*
Sample Date		*1/17/2007*	*3/18/2008*	*9/16/2010*	*1/17/2007*	*3/18/2008*	*2/11/2004*	*2/11/2004*	*2/11/2004*	*4/11/2013*	*4/11/2013*
Sample Type		*Duplicate*									*Duplicate*
	Units										
Metals											
Aluminum	mg/L	0.05 U	0.05 U	0.0248 J	0.0104 J	0.05 U	0.033 J	0.066 {AB}	0.0037 J	0.05 U	0.05 U
Antimony	mg/L	0.00011 J	0.002 U	0.002 U	0.00017 J	0.002 U	0.00016 J	0.00026 J	0.00024 J	0.002 U	0.002 U
Arsenic	mg/L	0.005 U	0.005 U	0.005 U	0.0154 {ABC}	0.0173 {ABC}	0.0074 J	0.024 {ABC}	0.0091 J	0.022 {BC}	0.022 {BC}
Barium	mg/L	0.0436 J	0.0344 J	0.0334 J	0.139	0.205	0.15	0.16	0.29	0.51	0.52
Beryllium	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Cadmium	mg/L	0.00011 J	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.001 U	0.001 U
Calcium	mg/L	-	-	-	-	-	-	-	-	-	-
Chromium	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.0019 J	0.0014 J	0.00083 J	0.00087 J
Chromium III (trivalent)	mg/L	-	-	-	-	-	-	-	-	-	-
Chromium VI (hexavalent)	mg/L	-	-	-	-	-	-	-	-	-	-
Cobalt	mg/L	0.007 U	0.007 U	0.007 U	0.002 J	0.0023 J	0.007 U	0.007 U	0.007 U	0.0016 J	0.0016 J
Copper	mg/L	0.00084 J	0.002 U	0.002 U	0.0017 J	0.002 U	0.00056 J	0.00056 J	0.00062 J	0.004 U	0.004 U
Iron	mg/L	0.1 U	0.1 U	0.1 U	8.32 {AB}	**13.3 [AB]**	1.9 {AB}	2.5 {AB}	2.9 J{AB}	**15 [B]**	**14 [B]**
Lead	mg/L	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.00036 J	0.00048 J
Magnesium	mg/L	-	-	-	-	-	-	-	-	-	-
Manganese	mg/L	0.0777 {AB}	0.0767 {AB}	0.237 {AB}	0.449 {AB}	0.325 {AB}	0.19 {AB}	0.3 {AB}	0.5 {AB}	0.61 {B}	0.61 {B}
Mercury	mg/L	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Nickel	mg/L	0.0021 J	0.02 U	0.02 U	0.0018 J	0.02 U	0.0052 J	0.02 J	0.025 U	0.0033 J	0.0037 J
Potassium	mg/L	-	-	-	-	-	-	-	-	-	-
Selenium	mg/L	**0.0098 [C]**	0.0031	0.002 U	0.0012 J	0.002 U	0.0012 J	0.00086 J	0.001 J	0.0011 J	0.0011 J
Silver	mg/L	0.0002 UJ	0.0002 U	0.0002 U	0.0002 UJ	0.0002 U	0.0005 UJ	0.0005 UJ	0.0005 UJ	0.0002 U	0.0002 U
Sodium	mg/L	-	-	-	-	-	-	-	-	-	-
Thallium	mg/L	0.00011 J	0.001 U	0.001 U	0.00064 J	0.001 U	0.001 U	0.000022 J	0.001 U	0.002 U	0.002 U
Vanadium	mg/L	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.007 U	0.007 U	0.007 U	0.00055 J	0.00048 J
Zinc	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.0064 J	0.0074 J	0.0093 J	0.05 U	0.05 U

Notes:

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COMPARISON TO SITE SPECIFIC BACKGROUND LEVELS - GROUNDWATER
2013 RFI REPORT
FORMER GENERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation		EAST01	EAST01	EAST01	EAST01	EAST01	EAST01	EAST01	EAST01	EAST01	EAST01	EAST01
Perimeter Status (1)		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Sample Location		CRA-209M [1]	CRA-209M [1]	CRA-209M [1]	CRA-209M [1]	CRA-209M [1]	CRA-209M [1]	CRA-214M-A [1]	CRA-214M-A [1]	CRA-214M-A [1]	CRA-217M [1]	CRA-218M-A [1]
Sample Identification		GW-17358-081804-CB-721	WG-17358-012207-EV-038	GW-17358-032008-DR-014	GW-17358-091610-JY-037	GW-17358-041712-DR-1046	GW-17358-040213-CT-010	GW-17358-081804-CB-716	GW-17358-081804-CB-717	WG-17358-012207-LJ-036	WG-17358-012307-DR-044	ATF-MW-18
Sample Date		8/18/2004	1/22/2007	3/20/2008	9/16/2010	4/17/2012	4/2/2013	8/18/2004	8/18/2004	1/22/2007	1/23/2007	5/2/1997
Sample Type									Duplicate			
	Units											
Metals												
Aluminum	mg/L	0.05 U	0.0503 {AB}	0.0332 J	0.0243 J	0.05 U	0.036 J	0.05 U	0.05 U	0.05 U	0.0223 J	-
Antimony	mg/L	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.00014 J	0.00093 J	0.05 U
Arsenic	mg/L	0.0094 J	0.0045 J	0.005 U	0.0085	0.0075	0.0052	0.0066 J	0.0076 J	0.005 U	0.005 U	0.1 {ABC}
Barium	mg/L	0.3	0.181	0.156	0.331	0.25	0.19	0.25	0.24	0.443	0.118	-
Beryllium	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.005 U
Cadmium	mg/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.001 U	0.001 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.014 {ABC}
Calcium	mg/L	-	-	-	-	-	-	-	-	-	-	-
Chromium	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.01 U	0.01 U	0.005 U	0.005 U	0.005 U	0.005 U	0.026 {C}
Chromium III (trivalent)	mg/L	-	-	-	-	-	-	-	-	-	-	-
Chromium VI (hexavalent)	mg/L	-	-	-	-	-	-	-	-	-	-	-
Cobalt	mg/L	0.0018 J	0.007 U	0.007 U	0.002 J	0.001 J	0.00059 J	0.007 U	0.007 U	0.007 U	0.007 U	-
Copper	mg/L	0.002 U	0.002 U	0.002 U	0.002 U	0.004 U	0.001 J	0.002 U	0.002 U	0.002 U	0.0022	0.13 {C}
Iron	mg/L	5.7 {AB}	2.56 {AB}	2.84 {AB}	4.34 {AB}	3.6 {AB}	2 {AB}	2.6 {AB}	2.7 {AB}	1.21 {AB}	1.36 {AB}	-
Lead	mg/L	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.00049 J	0.003 U	0.003 U	0.003 U	0.003 U	0.1 {ABC}
Magnesium	mg/L	-	-	-	-	-	-	-	-	-	-	-
Manganese	mg/L	0.7 {AB}	0.326 {AB}	0.503 {AB}	**0.702 {AB}**	0.6 {AB}	0.35 {AB}	0.24 {AB}	0.23 {AB}	0.262 {AB}	0.362 {AB}	-
Mercury	mg/L	0.0002 U	0.0002 U	0.00014 J{C}	0.0002 U	0.04 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Nickel	mg/L	0.025 U	0.02 U	0.02 U	0.02 U	0.0017 J	0.0016 J	0.025 U	0.025 U	0.02 U	0.02 U	0.059
Potassium	mg/L	-	-	-	-	-	-	-	-	-	-	-
Selenium	mg/L	0.0013 J	0.0013 J	0.002 U	0.002 U	0.005 U	0.005 U	0.002 U	0.002 U	0.00067 J	0.00093 J	0.0088 {C}
Silver	mg/L	0.0005 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0005 U	0.0005 U	0.0002 U	0.0002 UJ	0.01 U
Sodium	mg/L	-	-	-	-	-	-	-	-	-	-	-
Thallium	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.002 U	0.002 U	0.001 U	0.001 U	0.001 U	0.001 U	0.05 U
Vanadium	mg/L	0.007 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.007 U	0.007 U	0.004 U	0.004 U	-
Zinc	mg/L	0.015 U	0.0102 U	0.01 U	0.01 U	0.05 U	0.05 U	0.013 U	0.018 U	0.0106 U	0.01 U	0.41 {C}

Notes:

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COMPARISON TO SITE SPECIFIC BACKGROUND LEVELS - GROUNDWATER
2013 RFI REPORT
FORMER GENERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation		*EAST01*	*EAST01*	*EAST01*	*EAST01*	*EAST01*	*EAST01*	*EAST01*	*EAST01*	*EAST01*	*EAST01*	*EAST01*
Perimeter Status (1)		*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*
Sample Location		*CRA-218M-A [1]*	*CRA-219M [1]*	*CRA-320M [1]*	*CRA-320M [1]*	*CRA-321M [1]*	*CRA-321M [1]*	*CRA-321M [1]*	*CRA-321M [1]*	*CRA-322M [1]*	*CRA-322M [1]*	*CRA-322M [1]*
Sample Identification		*MW-18*	*CHIPHOUSE-MW-602*	*GW-17358-081804-CB-718*	*GW-17358-040213-CT-012*	*GW-17358-081704-MM-709*	*WG-17358-012307-EV-043*	*GW-17358-031708-DR-003*	*GW-17358-091410-DR-024*	*GW-17358-081704-MM-708*	*WG-17358-012307-JJ-045*	*GW-17358-032008-DR-012*
Sample Date		*5/2/1997*	*10/10/2000*	*8/18/2004*	*4/2/2013*	*8/17/2004*	*1/23/2007*	*3/17/2008*	*9/14/2010*	*8/17/2004*	*1/23/2007*	*3/20/2008*
Sample Type												
	Units											
Metals												
Aluminum	mg/L	-	-	0.05 U	0.05 U	0.03 J	0.0206 J	0.0481 J	0.0254 J	0.05 U	0.0304 J	0.115 {AB}
Antimony	mg/L	0.05 U	-	0.00018 J	0.002 U	0.002 U	0.0015 J	0.002 U	0.002 U	0.00015 J	0.00046 J	0.004
Arsenic	mg/L	0.01	-	0.01 U	0.0011 J	0.01 U	0.005 U	0.005 U	0.005 U	0.016 {ABC}	0.005 U	0.005 U
Barium	mg/L	-	-	0.074 J	0.14	0.068 J	0.205	0.311	0.16	0.017 J	0.0126 J	0.0506 J
Beryllium	mg/L	0.005 U	0.0005 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Cadmium	mg/L	0.014 {ABC}	0.00054	0.0005 U	0.001 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
Calcium	mg/L	-	-	-	-	-	-	-	-	-	-	-
Chromium	mg/L	-	0.0038	0.0041 J	0.01 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Chromium III (trivalent)	mg/L	-	-	-	-	-	-	-	-	-	-	-
Chromium VI (hexavalent)	mg/L	-	-	-	-	-	-	-	-	-	-	-
Cobalt	mg/L	-	-	0.007 U	0.02 U	0.007 U	0.007 U	0.007 U	0.007 U	0.007 U	0.007 U	0.007 U
Copper	mg/L	0.13 {C}	0.013	0.0027 U	0.0012 J	0.0021	0.0013 J	0.00088 J	0.002 U	0.0012 J	0.0008 J	0.0073
Iron	mg/L	-	-	0.77 {AB}	0.2 U	0.98 {AB}	1.26 {AB}	1.41 {AB}	1.36 {AB}	0.52 {AB}	0.376 {AB}	0.43 {AB}
Lead	mg/L	0.1 {ABC}	0.036 {AB}	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.0032 U
Magnesium	mg/L	-	-	-	-	-	-	-	-	-	-	-
Manganese	mg/L	-	-	0.015 U	0.05 U	0.11 {AB}	0.165 {AB}	0.232 {AB}	0.163 {AB}	0.053 {AB}	0.0538 {AB}	0.052 {AB}
Mercury	mg/L	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.000038 J{C}	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.00012 J{C}
Nickel	mg/L	0.059	0.008	0.025 U	0.00064 J	0.025 U	0.02 U	0.02 U	0.02 U	0.025 U	0.02 U	0.0053 J
Potassium	mg/L	-	-	-	-	-	-	-	-	-	-	-
Selenium	mg/L	0.0088 {C}	-	0.0035	0.0052 {C}	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.00066 J	0.002 U
Silver	mg/L	-	0.0002 U	0.0005 U	0.0002 U	0.0005 UJ	0.0002 UJ	0.0002 U	0.0002 U	0.0005 UJ	0.0002 UJ	0.0002 U
Sodium	mg/L	-	-	-	-	-	-	-	-	-	-	-
Thallium	mg/L	0.05 U	-	0.001 U	0.002 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Vanadium	mg/L	-	-	0.00092 J	0.00061 J	0.007 U	0.004 U	0.004 U	0.004 U	0.00097 J	0.004 U	0.004 U
Zinc	mg/L	0.41 {C}	0.049	0.01 U	0.05 U	0.0068 J	0.01 U	0.01 U	0.01 U	0.0053 J	0.01 U	0.0187 U

Notes:

- Background Levels for Site

- Least restrictive background level for four adjacent sites

- Concentration exceeds generic Part 201 clean up criteria (update September 28, 2012) and least restrictive background level for four adjacent sites

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Perimeter Status (1) - N - non-perimeter, Y - perimeter

mg/L - miligram per liter

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TABLE 3.11

COMPARISON TO SITE SPECIFIC BACKGROUND LEVELS - GROUNDWATER
2013 RFI REPORT
FORMER GENERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation		*EAST01*	*EAST01*	*EAST01*	*EAST01*	*EAST01*	*EAST01*	*EAST01*	*EAST01*	*EAST01*	*EAST01*
Perimeter Status (1)		*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*
Sample Location		*CRA-322M [1]*	*CRA-323M [1]*	*CRA-342M [1]*	*CRA-342M [1]*	*CRA-342M [1]*	*CRA-342M [1]*	*CRA-342M [1]*	*CRA-342M [1]*	*CRA-343M [1]*	*CRA-343M [1]*
Sample Identification		*GW-17358-091410-DR-023*	*WG-17358-012307-EV-046*	*GW-17358-082504-CB-741*	*WG-17358-012307-DR-041*	*GW-17358-031708-DR-001*	*GW-17358-091410-DR-027*	*GW-17358-041712-DR-1047*	*GW-17358-040213-CT-011*	*GW-17358-082504-MM-740*	*WG-17358-012307-JJ-042*
Sample Date		*9/14/2010*	*1/23/2007*	*8/25/2004*	*1/23/2007*	*3/17/2008*	*9/14/2010*	*4/17/2012*	*4/2/2013*	*8/25/2004*	*1/23/2007*
Sample Type											
	Units										
Metals											
Aluminum	mg/L	0.0464 J	0.05 U	**20.9 {AB}**	0.05 U	0.0389 J	0.0617 {AB}	0.023 J	0.051 {AB}	0.05 U	0.0586 {AB}
Antimony	mg/L	0.00033 J	0.00021 J	0.0009 J	0.0008 J	0.002 U	0.00046 J	0.00028 J	0.002 U	0.0005 J	0.00038 J
Arsenic	mg/L	0.0047 J	0.005 U	**0.033 [ABC]**	0.005 U	0.005 U	0.005 U	0.0011 J	0.00092 J	0.01 U	0.005 U
Barium	mg/L	0.0106 J	0.0282 J	0.14	0.0313 J	0.0475 J	0.115	0.05 J	0.038 J	0.031 J	0.0044 J
Beryllium	mg/L	0.001 U	0.001 U	0.0019 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Cadmium	mg/L	0.0005 U	0.0005 U	0.00073	0.0005 U	0.0005 U	0.0005 U	0.001 U	0.001 U	0.0005 U	0.0005 U
Calcium	mg/L	-	-	-	-	-	-	-	-	-	-
Chromium	mg/L	0.005 U	0.005 U	**0.039 [C]**	0.005 U	0.005 U	0.005 U	0.01 U	0.01 U	0.005 U	0.005 U
Chromium III (trivalent)	mg/L	-	-	-	0.01 U	-	-	-	-	-	-
Chromium VI (hexavalent)	mg/L	-	-	-	0.01 U	-	-	-	-	-	-
Cobalt	mg/L	0.007 U	0.007 U	0.017	0.007 U	0.007 U	0.007 U	0.00025 J	0.00026 J	0.007 U	0.007 U
Copper	mg/L	0.0025 U	0.0023	**0.093 [C]**	0.001 J	0.002 U	0.002 U	0.004 U	0.0017 J	0.002 U	0.0036
Iron	mg/L	0.211	2.71 {AB}	**27.2 [AB]**	0.1 U	0.1 U	0.163	0.2 U	0.2 U	0.58 {AB}	0.1 U
Lead	mg/L	0.003 U	0.003 U	**0.023 {AB}**	0.003 U	0.003 U	0.003 U	0.003 U	0.00019 J	0.003 U	0.003 U
Magnesium	mg/L	-	-	-	-	-	-	-	-	-	-
Manganese	mg/L	0.0925 {AB}	0.469 {AB}	0.57 {AB}	0.052 {AB}	0.137 {AB}	0.129 {AB}	0.066 {AB}	0.073 {AB}	0.12 {AB}	0.009 J
Mercury	mg/L	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.04 U	0.0002 U	0.0002 U	0.0002 U
Nickel	mg/L	0.02 U	0.02 U	0.046	0.02 U	0.02 U	0.02 U	0.0018 J	0.0022 J	0.025 U	0.02 U
Potassium	mg/L	-	-	-	-	-	-	-	-	-	-
Selenium	mg/L	0.002 U	0.002 U	0.0028 U	0.0025	0.002 U	0.002 U	0.00057 J	0.0011 J	0.002 U	0.002 U
Silver	mg/L	0.0002 U	0.0002 UJ	0.00015 J	0.0002 UJ	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0005 UJ	0.0002 UJ
Sodium	mg/L	-	-	-	-	-	-	-	-	-	-
Thallium	mg/L	0.001 U	0.001 U	0.00071 J	0.000062 J	0.001 U	0.001 U	0.002 U	0.002 U	0.001 U	0.001 U
Vanadium	mg/L	0.0016 J	0.004 U	**0.078 [ABC]**	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.007 U	0.004 U
Zinc	mg/L	0.01 U	0.01 U	0.14	0.01 U	0.01 U	0.01 U	0.05 U	0.05 U	0.01 U	0.01 U

Notes:

- Background Levels for Site

- Least restrictive background level for four adjacent sites

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mg/L - miligram per liter

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TABLE 3.11

COMPARISON TO SITE SPECIFIC BACKGROUND LEVELS - GROUNDWATER
2013 RFI REPORT
FORMER GENERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation		*EAST01*	*EAST01*	*EAST01*	*EAST01*	*EAST01*	*EAST01*	*EAST01*	*EAST01*	*EAST01*	*EAST01*
Perimeter Status (1)		*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*
Sample Location		*CRA-343M [1]*	*CRA-343M [1]*	*CRA-344M [1]*	*CRA-344M [1]*	*CRA-344M [1]*	*CRA-616M [1]*	*CRA-616M [1]*	*CRA-828M [1]*	*CRA-828M [1]*	*CRA-829M [1]*
Sample Identification		*GW-17358-031708-LJ-002*	*GW-17358-091410-DR-026*	*GW-17358-082504-CB-738*	*GW-17358-082504-CB-739*	*WG-17358-012407-DR-051*	*WG-17358-032708-DR-038*	*GW-17358-091610-JY-033*	*GW-17358-012312-DR-023*	*GW-17358-040213-CT-008*	*GW-17358-012312-DR-024*
Sample Date		*3/17/2008*	*9/14/2010*	*8/25/2004*	*8/25/2004*	*1/24/2007*	*3/27/2008*	*9/16/2010*	*1/23/2012*	*4/2/2013*	*1/23/2012*
Sample Type					*Duplicate*						
	Units										
Metals											
Aluminum	mg/L	0.297 {AB}	0.144 {AB}	0.05 U	0.05 U	0.0502 {AB}	0.05 U	0.0278 J	**1.4 {AB}**	0.039 J	0.35 {AB}
Antimony	mg/L	0.00039 J	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.00062 J	0.00042 J	0.002 U	0.0002 J
Arsenic	mg/L	0.0062 U	0.005 U	0.016 {ABC}	0.015 {ABC}	0.0095 U	0.005 U	0.005 U	0.0016 J	0.00094 J	0.0012 J
Barium	mg/L	0.1 U	0.1 U	0.067 J	0.065 J	0.0139 J	0.385	0.0689 J	0.079 J	0.087 J	0.075 J
Beryllium	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Cadmium	mg/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.001 U	0.001 U	0.001 U
Calcium	mg/L	-	-	-	-	-	-	-	-	-	-
Chromium	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.0021 J	0.01 U	0.01 U
Chromium III (trivalent)	mg/L	-	-	-	-	-	-	-	-	-	-
Chromium VI (hexavalent)	mg/L	-	-	-	-	-	-	-	-	-	-
Cobalt	mg/L	0.007 U	0.007 U	0.007 U	0.00097 J	0.007 U	0.007 U	0.007 U	0.0012 J	0.00027 J	0.00099 J
Copper	mg/L	0.0124	0.0045 U	0.002 U	0.002 U	0.00086 J	0.00075 J	0.002 U	0.004 U	0.00059 J	0.004 U
Iron	mg/L	0.183	0.158	3.9 {AB}	3.8 {AB}	6.17 {AB}	0.129	0.26	1.1 {AB}	0.23	0.46 {AB}
Lead	mg/L	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.00069 J	0.003 U	0.00032 J
Magnesium	mg/L	-	-	-	-	-	-	-	-	-	-
Manganese	mg/L	0.015 U	0.0134 J	0.57 {AB}	0.56 {AB}	**0.72 {AB}**	**1.22 {AB}**	**0.703 {AB}**	0.1 {AB}	0.072 {AB}	0.23 {AB}
Mercury	mg/L	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.04 U	0.0002 U	0.04 U
Nickel	mg/L	0.02 U	0.02 U	0.025 U	0.025 U	0.02 U	0.02 U	0.02 U	0.011 J	0.0014 J	0.0021 J
Potassium	mg/L	-	-	-	-	-	-	-	-	-	-
Selenium	mg/L	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.0008 J	0.005 U	0.005 U
Silver	mg/L	0.0002 U	0.0002 U	0.0005 UJ	0.0005 UJ	0.0002 UJ	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Sodium	mg/L	-	-	-	-	-	-	-	-	-	-
Thallium	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.00069 J	0.002 U	0.00036 J
Vanadium	mg/L	0.0059 {A}	0.004 U	0.007 U	0.00085 J	0.004 U	0.004 U	0.004 U	0.0033 J	0.004 U	0.0011 J
Zinc	mg/L	0.01 U	0.01 U	0.0042 J	0.0038 J	0.01 U	0.0054 J	0.01 U	0.05 U	0.05 U	0.05 U

Notes:

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COMPARISON TO SITE SPECIFIC BACKGROUND LEVELS - GROUNDWATER
2013 RFI REPORT
FORMER GENERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation		EAST01	EAST01	EAST02	EAST02	EAST02	EAST02	EAST02	EAST02	EAST02	EAST02	EAST02
Perimeter Status (1)		Y	N	Y	Y	Y	Y	Y	Y	Y	Y	N
Sample Location		CRA-829M [1]	MW-27	CRA-785D [1]	CRA-785D [1]	CRA-785D [1]	CRA-712I [1]	CRA-712I [1]	CRA-785I [1]	CRA-785I [1]	CRA-785I [1]	CRA-827ML [1]	CRA-110M
Sample Identification		GW-17358-040213-CT-009	ATF-MW-27	GW-17358-042312-CB-1080	GW-17358-041013-JY-077	GW-17358-041113-DR-086	GW-17358-041912-DR-1057	GW-17358-040813-JY-046	GW-17358-042312-CB-1079	GW-17358-041013-JY-078	GW-17358-040813-JY-053	SUB-MW-1
Sample Date		4/2/2013	5/2/1997	4/23/2012	4/10/2013	4/11/2013	4/19/2012	4/8/2013	4/23/2012	4/10/2013	4/8/2013	5/7/1997
Sample Type												
	Units											
Metals												
Aluminum	mg/L	0.11 {AB}	-	16 {AB}	**1.9 {AB}**	7.9][AB]	0.021 J	0.05 U	0.2 {AB}	0.058 {AB}	0.05 U	-
Antimony	mg/L	0.002 U	0.05 U	0.00052 J	0.002 U	0.002 U	0.00028 J	0.002 U	0.00026 J	0.002 U	0.002 U	0.05 U
Arsenic	mg/L	0.001 J	0.02 {ABC}	0.0041 J	0.0011 J	0.0027 J	0.0094	0.02 {ABC}	0.019 {ABC}	0.02 {ABC}	0.0015 J	0.024 {ABC}
Barium	mg/L	0.087 J	-	0.17	0.06 J	0.19	0.43	0.44	0.19	0.17	0.057 J	-
Beryllium	mg/L	0.001 U	0.005 U	0.00062 J	0.001 U	0.00042 J	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.005 U
Cadmium	mg/L	0.001 U	0.006 {AB}	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.005 U
Calcium	mg/L	-	-	36	-	-	-	-	-	-	-	-
Chromium	mg/L	0.01 U	0.02 U	0.026 {C}	0.0039 J	0.017 {C}	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.02 U
Chromium III (trivalent)	mg/L	-	-	-	-	-	-	-	-	-	-	-
Chromium VI (hexavalent)	mg/L	-	-	-	-	-	-	-	-	-	-	-
Cobalt	mg/L	0.0012 J	-	0.0056 J	0.00078 J	0.0038 J	0.0012 J	0.00036 J	0.00037 J	0.000068 J	0.00032 J	-
Copper	mg/L	0.0012 J	0.095 {C}	0.012	0.004 U	0.017 U	0.0026 J	0.00099 J	0.004 U	0.004 U	0.0004 J	0.02 U
Iron	mg/L	0.34 {AB}	-	**14 {AB}**	2 {AB}	9.3 {AB}	0.86 {AB}	2.2 {AB}	0.25	0.88 {AB}	0.099 J	-
Lead	mg/L	0.00024 J	0.04 U	0.0048 {AB}	0.0016 J	0.015 {AB}	0.0036	0.0005 J	0.00023 J	0.00033 J	0.003 U	0.04 U
Magnesium	mg/L	-	-	12	-	-	-	-	-	-	-	-
Manganese	mg/L	0.41 {AB}	-	0.2 {AB}	0.041 J	0.14 {AB}	0.12 {AB}	0.091 {AB}	0.089 {AB}	0.061 {AB}	0.16 {AB}	-
Mercury	mg/L	0.0002 U	0.0002 U	0.04 U	0.0002 U	0.0002 U	0.04 U	0.0002 U	0.04 U	0.0002 U	0.0002 U	0.002 U
Nickel	mg/L	0.0022 J	0.02 U	0.019 J	0.0028 J	0.013	0.0019 J	0.00066 J	0.00097 J	0.00045 J	0.00073 J	0.02 U
Potassium	mg/L	-	-	8.4	-	-	-	-	-	-	-	-
Selenium	mg/L	0.005 U	0.0047	0.00067 J	0.005 U	0.00071 J	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.024 {C}
Silver	mg/L	0.0002 U	0.01 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.01 U
Sodium	mg/L	-	-	58	-	-	-	-	-	-	-	-
Thallium	mg/L	0.002 U	0.05 U	0.00059 J	0.002 U	0.0003 J	0.002 U	0.002 U	0.00028 J	0.002 U	0.002 U	0.05 U
Vanadium	mg/L	0.00055 J	-	0.04 {AC}	0.0047 {A}	**0.022 {A}**	0.004 U	0.004 U	0.00068 J	0.004 U	0.004 U	-
Zinc	mg/L	0.05 U	0.18	0.05 U	0.056 U	0.12 U	0.006 J	0.05 U	0.05 U	0.05 U	0.05 U	0.064

Notes:

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2013 RFI REPORT
FORMER GENERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation		*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*
Perimeter Status (1)		*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*
Sample Location		*CRA-110M*	*CRA-110M*	*CRA-110M*	*CRA-110M*	*CRA-110M*	*CRA-113M*	*CRA-113M*	*CRA-113M*	*CRA-113M*	*CRA-124M*	*CRA-124M*
Sample Identification		*WG-17358-011807-DR-019*	*GW-17358-032808-EV-056*	*GW-17358-091710-JY-055*	*GW-17358-041212-CB-1008*	*GW-17358-040913-EM-067*	*SUB-TMW-11*	*WG-17358-011707-EV-002*	*GW-17358-041312-CB-1013*	*GW-17358-041113-JY-088*	*WG-17358-011707-NRS-001*	*GW-17358-041612-CB-1019*
Sample Date		*1/17/2007*	*3/28/2008*	*9/17/2010*	*4/12/2012*	*4/9/2013*	*10/10/2000*	*1/17/2007*	*4/13/2012*	*4/11/2013*	*1/17/2007*	*4/16/2012*
Sample Type												
	Units											
Metals												
Aluminum	mg/L	0.0076 J	0.05 U	0.117 {AB}	0.06 {AB}	0.023 J	-	0.0288 J	0.05 U	0.05 U	0.0151 J	0.05 U
Antimony	mg/L	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	-	0.00043 J	0.002 U	0.002 U	0.0016 J	0.00019 J
Arsenic	mg/L	0.0243 {ABC}	0.0135 {ABC}	0.012 {ABC}	0.01	0.01	-	0.0149 {ABC}	0.0091	0.0092	0.0113 {ABC}	0.013 {ABC}
Barium	mg/L	0.114	0.196	0.225	0.25	0.3	-	0.56	0.078 J	0.15	0.572	0.79
Beryllium	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0005 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Cadmium	mg/L	0.0005 U	0.0005 U	0.0005 U	0.001 U	0.001 U	0.00013	0.0005 U	0.001 U	0.00015 J	0.0005 U	0.001 U
Calcium	mg/L	-	-	-	-	-	-	-	-	-	-	-
Chromium	mg/L	0.005 U	0.005 U	0.005 U	0.01 U	0.0008 J	0.0031	0.005 U	0.01 U	0.01 U	0.005 U	0.01 U
Chromium III (trivalent)	mg/L	-	-	-	-	-	-	-	-	-	-	0.01 U
Chromium VI (hexavalent)	mg/L	-	-	-	-	-	-	-	-	-	-	0.01 U
Cobalt	mg/L	0.007 U	0.007 U	0.007 U	0.00093 J	0.00066 J	-	0.007 U	0.00011 J	0.00039 J	0.007 U	0.00054 J
Copper	mg/L	0.0043	0.00037 J	0.00079 J	0.004 U	0.004 U	0.015	0.0022 U	0.004 U	0.004 U	0.002 U	0.004 U
Iron	mg/L	4.7 {AB}	5.26 {AB}	4.03 {AB}	3.6 {AB}	5.1 {B}	-	8.98 {AB}	2.9 {AB}	5.2 {B}	**20.9 {AB}**	**14 {AB}**
Lead	mg/L	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.0056 {AB}	0.003 U	0.00027 J	0.00039 J	0.003 U	0.00021 J
Magnesium	mg/L	-	-	-	-	-	-	-	-	-	-	-
Manganese	mg/L	0.607 {AB}	0.419 {AB}	0.362 {AB}	0.27 {AB}	0.25 {B}	-	0.375 {AB}	0.23 {AB}	0.32 {B}	0.553 {AB}	0.43 {AB}
Mercury	mg/L	0.0002 U	0.0002 U	0.0002 U	0.04 U	0.0002 U	0.0002 U	0.0002 U	0.04 U	0.0002 U	0.0002 U	0.04 U
Nickel	mg/L	0.0022 J	0.02 U	0.02 U	0.0025 J	0.0018 J	0.01	0.0269	0.0011 J	0.0028 J	0.02 U	0.002 J
Potassium	mg/L	-	-	-	-	-	-	-	-	-	-	-
Selenium	mg/L	0.002 U	0.002 U	0.002 U	0.005 U	0.005 U	-	0.0013 J	0.005 U	0.005 U	0.002 U	0.005 U
Silver	mg/L	0.0002 UJ	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.000082 J	0.0002 U	0.0002 U	0.000065 J	0.0002 U
Sodium	mg/L	-	-	-	-	-	-	-	-	-	-	-
Thallium	mg/L	0.001 U	0.001 U	0.001 U	0.002 U	0.002 U	-	0.00011 J	0.002 U	0.0011 J	0.001 U	0.00048 J
Vanadium	mg/L	0.004 U	0.004 U	0.00067 J	0.004 U	0.004 U	-	0.0085 {A}	0.0011 J	0.0015 J	0.004 U	0.00076 J
Zinc	mg/L	0.01 U	0.01 U	0.0034 J	0.05 U	0.05 U	0.046	0.0273	0.05 U	0.05 U	0.0214 U	0.05 U

Notes:

- Background Levels for Site

- Least restrictive background level for four adjacent sites

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Perimeter Status (1) - N - non-perimeter, Y - perimeter

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TABLE 3.11

COMPARISON TO SITE SPECIFIC BACKGROUND LEVELS - GROUNDWATER
2013 RFI REPORT
FORMER GENERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation		*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*
Perimeter Status (1)		*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*
Sample Location		*CRA-124M*	*CRA-125M*	*CRA-128M*	*CRA-238M*	*CRA-238M*	*CRA-238M*	*CRA-239M*	*CRA-314M*	*CRA-314M*	*CRA-314M*	*CRA-314M*	*CRA-314M*
Sample Identification		*GW-17358-041113-JY-091*	*SUB-MW-6*	*SUB-MW-13*	*SUB-MW-12*	*GW-17358-041312-CB-1014*	*GW-17358-041113-JY-090*	*SUB-MW-7*	*WG-17358-011807-DR-020*	*GW-17358-032808-DR-057*	*GW-17358-091710-JY-054*	*GW-17358-041312-CB-1015*	*GW-17358-040913-EM-068*
Sample Date		*4/11/2013*	*5/7/1997*	*5/7/1997*	*5/7/1997*	*4/13/2012*	*4/11/2013*	*5/7/1997*	*1/17/2007*	*3/28/2008*	*9/17/2010*	*4/13/2012*	*4/9/2013*
Sample Type													
	Units												
Metals													
Aluminum	mg/L	0.05 U	-	-	-	0.05 U	0.05 U	-	0.0355 J	0.223 {AB}	0.104 {AB}	0.05 U	0.05 U
Antimony	mg/L	0.002 U	0.05 U	0.05 U	0.05 U	0.00029 J	0.002 U	0.05 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
Arsenic	mg/L	0.0041 J	**0.088 {ABC}**	0.021 {ABC}	**0.065 {ABC}**	0.0082	0.0098	**0.23 {ABC}**	0.0207 {ABC}	0.0175 {ABC}	0.0245 {ABC}	**0.025 {ABC}**	0.023 {BC}
Barium	mg/L	1	-	-	-	0.037 J	0.038 J	-	0.466	0.17	0.304	0.37	0.37
Beryllium	mg/L	0.001 U	0.005 U	0.005 U	0.005 U	0.001 U	0.001 U	0.005 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Cadmium	mg/L	0.001 U	0.005 U	0.005 U	0.005 U	0.001 U	0.001 U	0.005 U	0.0005 U	0.0005 U	0.0005 U	0.001 U	0.001 U
Calcium	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Chromium	mg/L	0.01 U	0.02 U	0.02 U	0.02 U	0.01 U	0.01 U	0.02 U	0.005 U	0.005 U	0.0029 J	0.01 U	0.01 U
Chromium III (trivalent)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Chromium VI (hexavalent)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Cobalt	mg/L	0.02 U	-	-	-	0.00081 J	0.00093 J	-	0.007 U	0.007 U	0.0021 J	0.0021 J	0.0021 J
Copper	mg/L	0.004 U	**0.03 {C}**	0.025	0.02 U	0.004 U	0.004 U	0.02 U	0.00081 J	0.00096 J	0.00036 J	0.004 U	0.004 U
Iron	mg/L	7.3 {B}	-	-	-	1.5 {AB}	1.3 {B}	-	8.83 {AB}	4.52 {AB}	**10.6 {AB}**	**15 {AB}**	**14 {B}**
Lead	mg/L	0.003 U	0.04 U	0.04 U	0.04 U	0.003 U	0.003 U	0.04 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U
Magnesium	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Manganese	mg/L	0.29 {B}	-	-	-	0.33 {AB}	0.38 {B}	-	0.232 {AB}	0.128 {AB}	0.247 {AB}	0.32 {AB}	0.26 {B}
Mercury	mg/L	0.0002 U	0.002 U	0.002 U	0.002 U	0.04 U	0.0002 U	0.002 U	0.0002 U	0.0002 U	0.0002 U	0.04 U	0.0002 U
Nickel	mg/L	0.02 U	0.02 U	0.02 U	0.073	0.024	0.039	0.051	0.0034 J	0.0035 J	0.0088 J	0.0062 J	0.0061 J
Potassium	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Selenium	mg/L	0.005 U	**0.014 {C}**	**0.011 {C}**	0.0044	0.005 U	0.005 U	0.0042	0.002 U	0.002 U	0.002 U	0.005 U	0.005 U
Silver	mg/L	0.0002 U	0.01 U	0.01 U	0.01 U	0.0002 U	0.0002 U	0.01 U	0.0002 UJ	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Sodium	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Thallium	mg/L	0.002 U	0.05 U	0.05 U	0.05 U	0.002 U	0.002 U	0.05 U	0.001 U	0.001 U	0.001 U	0.002 U	0.002 U
Vanadium	mg/L	0.004 U	-	-	-	0.0019 J	0.0013 J	-	0.004 U	0.004 U	0.0011 J	0.00059 J	0.00088 J
Zinc	mg/L	0.05 U	0.12	0.085	0.052	0.05 U	0.05 U	0.074	0.0171	0.006 J	0.0094 J	0.05 U	0.05 U

Notes:

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COMPARISON TO SITE SPECIFIC BACKGROUND LEVELS - GROUNDWATER
2013 RFI REPORT
FORMER GENERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation		*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*
Perimeter Status (1)		*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*Y*	*Y*
Sample Location		*CRA-315M*	*CRA-315M*	*CRA-756M*	*CRA-756M*	*CRA-757M*	*CRA-757M*	*CRA-757M*	*CRA-757M*	*CRA-133M [1]*	*CRA-133M [1]*
Sample Identification		*GW-17358-041312-CB-1012*	*GW-17358-041113-JY-089*	*GW-17358-041212-DR-1001*	*GW-17358-040813-JY-054*	*GW-17358-041212-DR-1003*	*GW-17358-041212-DR-1004*	*GW-17358-040813-JY-056*	*GW-17358-040813-JY-057*	*GW-17358-081704-MM-703*	*WG-17358-012407-JJ-057*
Sample Date		*4/13/2012*	*4/11/2013*	*4/12/2012*	*4/8/2013*	*4/12/2012*	*4/12/2012*	*4/8/2013*	*4/8/2013*	*8/17/2004*	*1/24/2007*
Sample Type							*Duplicate*				
	Units										
Metals											
Aluminum	mg/L	0.05 U	0.05 U	0.061 {AB}	0.02 J	0.046 J	0.057 {AB}	0.019 J	0.02 J	0.013 J	0.0708 {AB}
Antimony	mg/L	0.00026 J	0.002 U	0.00014 J	0.002 U	0.00016 J	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
Arsenic	mg/L	0.017 {ABC}	0.019 {BC}	**0.046 [ABC]**	**0.065 [BC]**	0.0087	0.0091	0.013 {BC}	0.015 {BC}	0.0052 J	0.0075 U
Barium	mg/L	0.093 J	0.14	0.18	0.15	0.19	0.19	0.24	0.25	0.14	0.0383 J
Beryllium	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Cadmium	mg/L	0.00054 J	0.0003 J	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0005 U	0.0005 U
Calcium	mg/L	-	-	-	-	-	-	-	-	-	-
Chromium	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.00086 J	0.005 U	0.005 U
Chromium III (trivalent)	mg/L	-	-	-	-	0.01 U	0.01 U	-	-	-	-
Chromium VI (hexavalent)	mg/L	-	-	-	-	0.0074 J	0.0086 J	-	-	-	-
Cobalt	mg/L	0.0077 J	0.0086 J	0.0034 J	0.0024 J	0.0035 J	0.0035 J	0.0018 J	0.0019 J	0.007 U	0.007 U
Copper	mg/L	0.004 U	0.004 U	0.0017 J	0.004 U	0.004 U	0.004 U	0.00034 J	0.004 U	0.0017 J	0.0036
Iron	mg/L	3.5 {AB}	4.5 {B}	**9.7 [AB]**	**15 [B]**	5.4 {AB}	5.3 {AB}	7 {B}	7.7 {B}	3.5 {AB}	2.62 {AB}
Lead	mg/L	0.00019 J	0.00074 J	0.00067 J	0.003 U	0.00027 J	0.003 U	0.00026 J	0.00022 J	0.003 U	0.003 U
Magnesium	mg/L	-	-	-	-	-	-	-	-	-	-
Manganese	mg/L	0.2 {AB}	0.19 {B}	0.41 {AB}	0.33 {B}	**0.85 [AB]**	**0.83 {AB}**	**0.74 [B]**	**0.8 [B]**	0.33 {AB}	0.148 {AB}
Mercury	mg/L	0.04 U	0.0002 U	0.04 U	0.0002 U	0.04 U	0.04 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Nickel	mg/L	0.023	0.019 J	0.018 J	0.016 J	0.022	0.021	0.016 J	0.017 J	0.025 U	0.02 U
Potassium	mg/L	-	-	-	-	-	-	-	-	-	-
Selenium	mg/L	0.00066 J	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.002 U	0.002 U
Silver	mg/L	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0005 UJ	0.0002 UJ
Sodium	mg/L	-	-	-	-	-	-	-	-	-	-
Thallium	mg/L	0.00017 J	0.00017 J	0.00032 J	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.001 U	0.001 U
Vanadium	mg/L	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.007 U	0.004 U
Zinc	mg/L	0.05 U	0.05 U	0.007 J	0.05 U	0.0046 J	0.05 U	0.05 U	0.05 U	0.01	0.01 U

Notes:

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2013 RFI REPORT
FORMER GENERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation		*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*
Perimeter Status (1)		*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*
Sample Location		*CRA-133M [1]*	*CRA-133M [1]*	*CRA-133M [1]*	*CRA-133M [1]*	*CRA-226M [1]*	*CRA-226M [1]*	*CRA-251M [1]*	*CRA-251M [1]*	*CRA-324M [1]*	*CRA-324M [1]*
Sample Identification		*GW-17358-032008-DR-011*	*GW-17358-091410-DR-022*	*GW-17358-041712-CB-1037*	*GW-17358-041013-JY-079*	*GW-17358-081804-MM-720*	*WG-17358-012407-EV-053*	*GW-17358-081704-MM-707*	*WG-17358-012307-DR-048*	*GW-17358-081804-MM-719*	*WG-17358-012407-EV-056*
Sample Date		*3/20/2008*	*9/14/2010*	*4/17/2012*	*4/10/2013*	*8/18/2004*	*1/24/2007*	*8/17/2004*	*1/23/2007*	*8/18/2004*	*1/24/2007*
Sample Type											
	Units										
Metals											
Aluminum	mg/L	0.0389 J	0.165 {AB}	0.05 U	0.05 U	0.07 U	0.131 {AB}	0.091 {AB}	0.0446 J	0.05 U	**1.2 {AB}**
Antimony	mg/L	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.00024 J	0.002 U	0.002 U	0.00024 J	0.00064 J
Arsenic	mg/L	0.011 U	0.0083	0.0042 J	0.0038 J	0.0091 J	0.005 U	0.012 {ABC}	0.0051 U	0.01 U	0.005 U
Barium	mg/L	0.131	0.193	0.19	0.26	0.1 U	0.0403 J	0.037 J	0.0432 J	0.019 J	0.0133 J
Beryllium	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Cadmium	mg/L	0.0005 U	0.0005 U	0.001 U	0.001 U	0.0005 U	0.00014 J	0.00049 J	0.0005 U	0.0005 U	0.0005 U
Calcium	mg/L	-	-	-	-	-	-	-	-	-	-
Chromium	mg/L	0.005 U	0.005 U	0.01 U	0.01 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Chromium III (trivalent)	mg/L	-	-	-	-	-	-	-	-	-	-
Chromium VI (hexavalent)	mg/L	-	-	-	-	-	-	-	-	-	-
Cobalt	mg/L	0.007 U	0.007 U	0.00019 J	0.0015 J	0.007 U	0.007 U	0.007 U	0.007 U	0.007 U	0.007 U
Copper	mg/L	0.002 U	0.0092	0.004 U	0.004 U	0.0062	0.0094	0.004	0.0099	0.002 U	0.0083
Iron	mg/L	7.26 {AB}	2.84 {AB}	3.5 {AB}	3 {AB}	3.2 {AB}	2.08 {AB}	2.2 {AB}	1.9 {AB}	0.77 {AB}	2.28 {AB}
Lead	mg/L	0.003 U	0.0042 U	0.0003 J	0.00045 J	**0.0059 {AB}**	0.002 J	0.003 U	0.003 U	0.003 U	0.0024 J
Magnesium	mg/L	-	-	-	-	-	-	-	-	-	-
Manganese	mg/L	0.404 {AB}	0.308 {AB}	0.39 {AB}	0.56 {AB}	0.2 {AB}	0.151 {AB}	0.18 {AB}	0.442 {AB}	0.08 {AB}	0.047
Mercury	mg/L	0.0002 U	0.0002 U	0.04 U	0.0002 U	0.0002 U	0.0002 U	0.000043 J{C}	0.0002 U	0.0002 U	0.0002 U
Nickel	mg/L	0.02 U	0.02 U	0.0011 J	0.0044 J	0.025 U	0.02 U	0.025 U	0.02 U	0.025 U	0.02 U
Potassium	mg/L	-	-	-	-	-	-	-	-	-	-
Selenium	mg/L	0.002 U	0.002 U	0.005 U	0.005 U	0.002 U	0.0012 J	0.002 U	0.002 U	0.0012 J	0.00074 J
Silver	mg/L	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0005 U	0.0002 UJ	0.0005 UJ	0.0002 UJ	0.0005 U	0.0002 UJ
Sodium	mg/L	-	-	-	-	-	-	-	-	-	-
Thallium	mg/L	0.001 U	0.001 U	0.002 U	0.002 U	0.001 U	0.000029 J	0.001 U	0.001 U	0.001 U	0.000032 J
Vanadium	mg/L	0.004 U	0.004 U	0.004 U	0.004 U	0.007 U	0.004 U	0.007 U	0.004 U	0.007 U	0.0061 {A}
Zinc	mg/L	0.01 U	0.01 U	0.05 U	0.05 U	0.01 U	0.0196 U	0.011	0.01 U	0.01 U	0.0188 U

Notes:

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2013 RFI REPORT
FORMER GENERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation		*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*
Perimeter Status (1)		*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*
Sample Location		*CRA-325M [1]*	*CRA-325M [1]*	*CRA-325M [1]*	*CRA-325M [1]*	*CRA-325M [1]*	*CRA-325M [1]*	*CRA-325M [1]*	*CRA-345M [1]*	*CRA-345M [1]*	*CRA-346M [1]*
Sample Identification		*GW-17358-081704-MM-702*	*WG-17358-012407-DR-058*	*GW-17358-032008-DR-016*	*GW-17358-091410-DR-020*	*GW-17358-091410-DR-021*	*GW-17358-041812-EM-1056*	*GW-17358-040813-JY-047*	*GW-17358-082504-MM-737*	*WG-17358-012307-DR-047*	*GW-17358-082504-MM-736*
Sample Date		*8/17/2004*	*1/24/2007*	*3/20/2008*	*9/14/2010*	*9/14/2010*	*4/18/2012*	*4/8/2013*	*8/25/2004*	*1/23/2007*	*8/25/2004*
Sample Type						*Duplicate*					
	Units										
Metals											
Aluminum	mg/L	0.05 U	0.0293 J	0.0624 {AB}	0.0823 {AB}	0.0718 {AB}	0.05 U	0.022 J	0.071 U	0.05 U	0.25 {AB}
Antimony	mg/L	0.002 U	0.00029 J	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.00051 J	0.00033 J	0.00055 J
Arsenic	mg/L	0.01 U	0.005 U	0.005 U	0.005 U	0.005 U	0.014 {ABC}	0.0066	0.0027 J	0.005 U	0.01 U
Barium	mg/L	0.075 J	0.0577 J	0.0611 J	0.0703 J	0.073 J	0.052 J	0.073 J	0.0076 J	0.0218 J	0.0069 J
Beryllium	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Cadmium	mg/L	0.00037 J	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.001 U	0.001 U	0.0005 U	0.0005 U	0.0005 U
Calcium	mg/L	-	-	-	-	-	-	-	-	-	-
Chromium	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.01 U	0.01 U	0.005 U	0.005 U	0.005 U
Chromium III (trivalent)	mg/L	-	-	-	-	-	-	-	-	-	-
Chromium VI (hexavalent)	mg/L	-	-	-	-	-	-	-	-	-	-
Cobalt	mg/L	0.007 U	0.007 U	0.007 U	0.0025 J	0.007 U	0.0029 J	0.0035 J	0.007 U	0.007 U	0.007 U
Copper	mg/L	0.0013 J	0.0015 J	0.002 U	0.003 U	0.002 U	0.00082 J	0.00068 J	0.0022 U	0.0013 J	0.0029 U
Iron	mg/L	1.4 {AB}	0.136 U	0.259	0.783 {AB}	0.723 {AB}	**9.6 {AB}**	5.1 {AB}	0.56 {AB}	0.195 U	0.98 {AB}
Lead	mg/L	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.00023 J	0.003 U	0.003 U	0.003 U
Magnesium	mg/L	-	-	-	-	-	-	-	-	-	-
Manganese	mg/L	0.48 {AB}	0.188 {AB}	0.259 {AB}	**0.795 {AB}**	**0.867 {AB}**	0.34 {AB}	0.41 {AB}	0.12 {AB}	0.0831 {AB}	0.027
Mercury	mg/L	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.04 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Nickel	mg/L	0.0048 J	0.02 U	0.02 U	0.0053 J	0.02 U	0.0043 J	0.0048 J	0.025 U	0.02 U	0.025 U
Potassium	mg/L	-	-	-	-	-	-	-	-	-	-
Selenium	mg/L	0.002 U	0.0016 J	0.002 U	0.002 U	0.002 U	0.005 U	0.005 U	0.0023 U	0.002 U	0.002 U
Silver	mg/L	0.0005 UJ	0.0002 UJ	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0005 UJ	0.0002 UJ	0.0005 UJ
Sodium	mg/L	-	-	-	-	-	-	-	-	-	-
Thallium	mg/L	0.00005 J	0.000043 J	0.001 U	0.001 U	0.001 U	0.002 U	0.002 U	0.001 U	0.001 U	0.001 U
Vanadium	mg/L	0.007 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.00091 J	0.004 U	0.0022 J
Zinc	mg/L	0.0056 J	0.01 U	0.01 U	0.01 U	0.01 U	0.05 U	0.05 U	0.0055 J	0.01 U	0.006 J

Notes:

- Background Levels for Site

- Least restrictive background level for four adjacent sites

- Concentration exceeds generic Part 201 clean up criteria (update September 28, 2012) and least restrictive background level for four adjacent sites

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Perimeter Status (1) - N - non-perimeter, Y - perimeter

mg/L - miligram per liter

U - Not detected at the associated reporting limit.

J - Estimated concentration.

UJ - Not detected; associated reporting limit is estimated.

TABLE 3.11

COMPARISON TO SITE SPECIFIC BACKGROUND LEVELS - GROUNDWATER
2013 RFI REPORT
FORMER GENERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation		*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*
Perimeter Status (1)		*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*
Sample Location		*CRA-346M [1]*	*CRA-347M [1]*	*CRA-347M [1]*	*CRA-347M [1]*	*CRA-610M [1]*	*CRA-610M [1]*	*CRA-610M [1]*	*CRA-611M [1]*	*CRA-611M [1]*	*CRA-612M [1]*
Sample Identification		*WG-17358-012407-JJ-052*	*GW-17358-082504-MM-735*	*WG-17358-012407-DR-054*	*WG-17358-012407-DR-055*	*GW-17358-091710-JY-036*	*GW-17358-041712-CB-1039*	*GW-17358-040813-JY-048*	*WG-17358-032708-DR-043*	*GW-17358-091610-JY-029*	*WG-17358-032708-DR-041*
Sample Date		*1/24/2007*	*8/25/2004*	*1/24/2007*	*1/24/2007*	*9/17/2010*	*4/17/2012*	*4/8/2013*	*3/27/2008*	*9/16/2010*	*3/27/2008*
Sample Type					*Duplicate*						
	Units										
Metals											
Aluminum	mg/L	**0.962 {AB}**	**1.2 {AB}**	0.171 {AB}	0.149 {AB}	0.529 {AB}	3 {AB}	0.15 {AB}	0.05 U	0.0751 {AB}	0.137 {AB}
Antimony	mg/L	0.00058 J	0.0016 J	0.00047 J	0.00048 J	0.00059 J	0.001 J	0.002 U	0.002 U	0.00041 J	0.002 U
Arsenic	mg/L	0.005 U	0.0051 J	0.005 U	0.005 U	0.005 U	0.0022 J	0.005 U	0.005 U	0.005 U	0.0037 J
Barium	mg/L	0.0127 J	0.014 J	0.1 U	0.1 U	0.0107 J	0.016 J	0.007 J	0.0596 J	0.0152 J	0.0057 J
Beryllium	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Cadmium	mg/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.001 U	0.001 U	0.0005 U	0.0005 U	0.0005 U
Calcium	mg/L	-	-	-	-	-	-	-	-	-	-
Chromium	mg/L	0.005 U	0.0023 J	0.005 U	0.005 U	0.005 U	0.0041 J	0.0011 J	0.005 U	0.005 U	0.005 U
Chromium III (trivalent)	mg/L	-	-	0.01 U	0.01 U	-	-	-	-	-	-
Chromium VI (hexavalent)	mg/L	-	-	0.01 U	0.01 U	-	-	-	-	-	-
Cobalt	mg/L	0.007 U	0.00097 J	0.007 U	0.007 U	0.007 U	0.00087 J	0.00035 J	0.007 U	0.007 U	0.007 U
Copper	mg/L	0.0033	0.0061	0.0017 J	0.0015 J	0.0044	0.009	0.0031 J	0.00058 J	0.002 U	0.0033
Iron	mg/L	1.5 {AB}	2.1 {AB}	0.274 U	0.241 U	0.521 {AB}	2.7 {AB}	0.15 J	0.819 {AB}	0.261	0.328 {AB}
Lead	mg/L	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.0016 J	0.00038 J	0.003 U	0.003 U	0.003 U
Magnesium	mg/L	-	-	-	-	-	-	-	-	-	-
Manganese	mg/L	0.0071 J	0.02	0.015 U	0.015 U	0.0131 J	0.018 J	0.031 J	0.174 {AB}	0.0686 {AB}	0.0061 J
Mercury	mg/L	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.04 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Nickel	mg/L	0.02 U	0.0033 J	0.02 U	0.02 U	0.02 U	0.0039 J	0.0011 J	0.02 U	0.02 U	0.02 U
Potassium	mg/L	-	-	-	-	-	-	-	-	-	-
Selenium	mg/L	0.0012 J	0.0039 U	0.0021	0.0023	0.002 U	0.00087 J	0.0013 J	0.002 U	0.002 U	0.002 U
Silver	mg/L	0.0002 UJ	0.000062 J	0.0002 UJ	0.0002 UJ	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Sodium	mg/L	-	-	-	-	-	-	-	-	-	-
Thallium	mg/L	0.000027 J	0.001 U	0.000033 J	0.000032 J	0.001 U	0.002 U	0.002 U	0.001 U	0.001 U	0.001 U
Vanadium	mg/L	0.0031 J	0.0055 J{A}	0.004 U	0.004 U	0.0022 J	0.0083 {A}	0.00099 J	0.004 U	0.004 U	0.004 U
Zinc	mg/L	0.01 U	0.013	0.01 U	0.01 U	0.0047 J	0.05 U	0.05 U	0.01 U	0.01 U	0.01 U

Notes:

- Background Levels for Site

- Least restrictive background level for four adjacent sites

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Perimeter Status (1) - N - non-perimeter, Y - perimeter

mg/L - miligram per liter

U - Not detected at the associated reporting limit.

J - Estimated concentration.

UJ - Not detected; associated reporting limit is estimated.

TABLE 3.11

COMPARISON TO SITE SPECIFIC BACKGROUND LEVELS - GROUNDWATER
2013 RFI REPORT
FORMER GENERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation		*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*EAST02*	*NORTH PERIMETER*	*NORTH PERIMETER*
Perimeter Status (1)		*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*
Sample Location		*CRA-612M [1]*	*CRA-612M [1]*	*CRA-613M [1]*	*CRA-613M [1]*	*CRA-614M [1]*	*CRA-615M [1]*	*CRA-837ML [1]*	*CRA-837ML [1]*	*CRA-704D [1]*	*CRA-704D [1]*
Sample Identification		*WG-17358-032708-DR-042*	*GW-17358-091610-JY-030*	*WG-17358-032708-DR-044*	*GW-17358-091610-JY-031*	*GW-17358-091610-JY-035*	*GW-17358-091610-JY-034*	*GW-17358-041712-CB-1040*	*GW-17358-040213-CT-014*	*GW-17358-042512-JY-1097*	*GW-17358-041013-JY-075*
Sample Date		*3/27/2008*	*9/16/2010*	*3/27/2008*	*9/16/2010*	*9/16/2010*	*9/16/2010*	*4/17/2012*	*4/2/2013*	*4/25/2012*	*4/10/2013*
Sample Type		*Duplicate*									
	Units										
Metals											
Aluminum	mg/L	0.128 {AB}	**1.72 {AB}**	5.07 {AB}	0.0566 {AB}	0.0626 {AB}	0.0444 J	0.27 {AB}	0.15 {AB}	16 {AB}	**1.2 {AB}**
Antimony	mg/L	0.002 U	0.00083 J	0.002 U	0.00063 J	0.00062 J	0.0013 J	0.00054 J	0.002 U	0.0015 J	0.002 U
Arsenic	mg/L	0.005 U	0.005 U	0.0038 J	0.005 U	0.005 U	0.005 U	0.0066	0.012 {ABC}	0.0072	0.0038 J
Barium	mg/L	0.0059 J	0.0106 J	0.0139 J	0.1 U	0.021 J	0.0282 J	0.076 J	0.1	0.15	0.059 J
Beryllium	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0007 J	0.001 U
Cadmium	mg/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.001 U	0.001 U	0.001 U	0.001 U
Calcium	mg/L	-	-	-	-	-	-	-	-	-	-
Chromium	mg/L	0.005 U	0.003 J	0.0028 J	0.005 U	0.005 U	0.005 U	0.01 U	0.01 U	0.019 {C}	0.0023 J
Chromium III (trivalent)	mg/L	-	-	-	-	-	-	-	-	-	-
Chromium VI (hexavalent)	mg/L	-	-	-	-	-	-	-	-	-	-
Cobalt	mg/L	0.007 U	0.0017 J	0.0025 J	0.007 U	0.007 U	0.007 U	0.00011 J	0.00016 J	0.0051 J	0.00053 J
Copper	mg/L	0.0029	0.0077	0.0139	0.002 U	0.0021 U	0.0027 U	0.004 U	0.0007 J	0.011	0.004 U
Iron	mg/L	0.169	2.23 {AB}	6.94 {AB}	0.1 U	0.1 U	0.1 U	0.18 J	5.8 {AB}	**12 {AB}**	1.4 {AB}
Lead	mg/L	0.003 U	0.003 U	0.0039 U	0.003 U	0.003 U	0.003 U	0.003 U	0.0003 J	0.0045 {AB}	0.00092 J
Magnesium	mg/L	-	-	-	-	-	-	-	-	-	-
Manganese	mg/L	0.0056 J	0.0666 {AB}	0.0488	0.015 U	0.0074 J	0.0794 {AB}	0.071 {AB}	0.16 {AB}	0.15 {AB}	0.06 {AB}
Mercury	mg/L	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.04 U	0.0002 U	0.08 U	0.0002 U
Nickel	mg/L	0.02 U	0.0034 J	0.0066 J	0.02 U	0.02 U	0.02 U	0.0022 J	0.00079 J	0.016 J	0.004 J
Potassium	mg/L	-	-	-	-	-	-	-	-	-	-
Selenium	mg/L	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.0016 J	0.005 U	0.005 U	0.00099 J	0.005 U
Silver	mg/L	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Sodium	mg/L	-	-	-	-	-	-	-	-	-	-
Thallium	mg/L	0.001 U	0.001 U	0.00016 J	0.001 U	0.001 U	0.001 U	0.002 U	0.002 U	0.00037 J	0.002 U
Vanadium	mg/L	0.004 U	0.0066 {A}	**0.02 {A}**	0.0013 J	0.004 U	0.004 U	0.0035 J	0.00054 J	0.036 {AC}	0.0029 J
Zinc	mg/L	0.01 U	0.0273 U	0.0271	0.01 U	0.01 U	0.0268 U	0.05 U	0.05 U	0.05 U	0.051 U

Notes:

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Perimeter Status (1) - N - non-perimeter, Y - perimeter

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TABLE 3.11

COMPARISON TO SITE SPECIFIC BACKGROUND LEVELS - GROUNDWATER
2013 RFI REPORT
FORMER GENERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation		NORTH PERIMETER	NORTH PERIMETER	NORTH PERIMETER	NORTH PERIMETER	NORTH PERIMETER	NORTH PERIMETER	NORTH PERIMETER	NORTH PERIMETER	NORTH PERIMETER	NORTH PERIMETER
Perimeter Status (1)		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Sample Location		CRA-704D [1]	CRA-703I [1]	CRA-703I [1]	CRA-703I [1]	CRA-703I [1]	CRA-704I [1]	CRA-704I [1]	CRA-264M [1]	CRA-264M [1]	CRA-264M [1]
Sample Identification		GW-17358-041113-DR-085	GW-17358-042012-JY-1069	GW-17358-080312-CB-004	GW-17358-080312-CB-005	GW-17358-041213-EM-095	GW-17358-042512-JY-1098	GW-17358-041013-JY-074	GW-17358-012312-DR-027	GW-17358-012312-DR-028	GW-17358-041713-DR-116
Sample Date		4/11/2013	4/20/2012	8/3/2012	8/3/2012	4/12/2013	4/25/2012	4/10/2013	1/23/2012	1/23/2012	4/17/2013
Sample Type					Duplicate					Duplicate	
	Units										
Metals											
Aluminum	mg/L	**1.4 J{AB}**	0.027 J	0.05 U	0.05 U	0.05 U	0.41 {AB}	0.03 J	0.027 J	0.02 J	0.05 U
Antimony	mg/L	0.002 U	0.0002 J	0.002 U	0.002 U	0.002 U	0.00068 J	0.002 U	0.00014 J	0.00013 J	0.002 U
Arsenic	mg/L	0.0052	0.013 {ABC}	0.022 {ABC}	0.023 {ABC}	0.016 {ABC}	0.011 {ABC}	0.0095	0.00088 J	0.00081 J	0.005 U
Barium	mg/L	0.047 J	0.45	0.48	0.48	0.48	0.42	0.41	0.058 J	0.064 J	0.081 J
Beryllium	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Cadmium	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Calcium	mg/L	-	170	-	-	-	-	-	-	-	-
Chromium	mg/L	0.0026 J	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Chromium III (trivalent)	mg/L	-	-	-	-	-	-	-	-	-	-
Chromium VI (hexavalent)	mg/L	-	-	-	-	-	-	-	-	-	-
Cobalt	mg/L	0.00069 J	0.00035 J	0.02 U	0.02 U	0.000022 J	0.0012 J	0.00031 J	0.0004 J	0.0004 J	0.02 U
Copper	mg/L	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U
Iron	mg/L	1.4 {AB}	2 {AB}	3.6 {AB}	3.6 {AB}	2.7 {AB}	0.79 {AB}	0.52 {AB}	0.54 {AB}	0.54 {AB}	0.44 {AB}
Lead	mg/L	0.00099 J	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.0018 J	0.003 U	0.003 U	0.003 U
Magnesium	mg/L	-	41	-	-	-	-	-	-	-	-
Manganese	mg/L	0.037 J	0.15 {AB}	0.13 {AB}	0.13 {AB}	0.12 {AB}	0.21 {AB}	0.11 {AB}	0.2 {AB}	0.2 {AB}	0.19 {AB}
Mercury	mg/L	0.0002 U	0.04 U	0.0002 U	0.0002 U	0.0002 U	0.04 U	0.0002 U	0.04 U	0.04 U	0.0002 U
Nickel	mg/L	0.0021 J	0.001 J	0.00031 J	0.02 U	0.02 U	0.0029 J	0.0013 J	0.0012 J	0.0012 J	0.02 U
Potassium	mg/L	-	2.2 J	-	-	-	-	-	-	-	-
Selenium	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.0014 J	0.00097 J	0.0013 J
Silver	mg/L	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Sodium	mg/L	-	230 {A}	-	-	-	-	-	-	-	-
Thallium	mg/L	0.0002 J	0.002 U	0.002 U	0.002 U	0.002 U	0.00019 J	0.002 U	0.00016 J	0.00014 J	0.002 U
Vanadium	mg/L	0.0034 J	0.004 U	0.004 U	0.004 U	0.004 U	0.0014 J	0.004 U	0.004 U	0.004 U	0.004 U
Zinc	mg/L	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U

Notes:

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U - Not detected at the associated reporting limit.

J - Estimated concentration.

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TABLE 3.11

COMPARISON TO SITE SPECIFIC BACKGROUND LEVELS - GROUNDWATER
2013 RFI REPORT
FORMER GENERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation		*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*
Perimeter Status (1)		*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*
Sample Location		*CRA-266M [1]*	*CRA-701M [1]*	*CRA-701M [1]*	*CRA-703M [1]*	*CRA-703M [1]*	*CRA-703M [1]*	*CRA-703M [1]*	*CRA-704M [1]*	*CRA-704M [1]*	*CRA-704M [1]*
Sample Identification		*GW-17358-012312-DR-029*	*GW-17358-042012-JY-1070*	*GW-17358-080712-BW-007*	*GW-17358-042012-JY-1067*	*GW-17358-042012-JY-1068*	*GW-17358-080312-CB-006*	*GW-17358-041213-EM-096*	*GW-17358-042512-JY-1096*	*GW-17358-080312-CB-003*	*GW-17358-041013-JY-076*
Sample Date		*1/23/2012*	*4/20/2012*	*8/7/2012*	*4/20/2012*	*4/20/2012*	*8/3/2012*	*4/12/2013*	*4/25/2012*	*8/3/2012*	*4/10/2013*
Sample Type						*Duplicate*					
	Units										
Metals											
Aluminum	mg/L	0.042 J	0.05 U	5.5 {AB}	0.049 J	0.058 {AB}	0.061 {AB}	0.05 U	0.05 U	0.05 U	0.05 U
Antimony	mg/L	0.00019 J	0.00036 J	0.00033 J	0.00038 J	0.00042 J	0.00029 J	0.002 U	0.00064 J	0.002 U	0.002 U
Arsenic	mg/L	0.0045 J	0.00079 J	0.007	0.0015 J	0.0015 J	0.0029 J	0.00076 J	0.00081 J	0.0039 J	0.0025 J
Barium	mg/L	0.023 J	0.089 J	0.13	0.13	0.13	0.14	0.11	0.17	0.39	0.35
Beryllium	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.00029 J	0.001 U	0.001 U	0.001 U	0.001 U
Cadmium	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.00046 J	0.001 U	0.001 U	0.001 U	0.001 U
Calcium	mg/L	-	120	-	95	97	-	-	-	-	-
Chromium	mg/L	0.01 U	0.01 U	0.009 J	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Chromium III (trivalent)	mg/L	-	0.01 U	-	-	-	-	-	-	-	-
Chromium VI (hexavalent)	mg/L	-	0.01 U	-	-	-	-	-	-	-	-
Cobalt	mg/L	0.00017 J	0.00033 J	0.0048 J	0.0014 J	0.0014 J	0.0014 J	0.00024 J	0.02 U	0.0012 J	0.0007 J
Copper	mg/L	0.004 U	0.004 U	0.0095	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U
Iron	mg/L	0.15 J	0.2 U	9.4 {AB}	0.034 J	0.047 J	0.36 {AB}	0.2 U	0.2 U	0.39 {AB}	0.82 {AB}
Lead	mg/L	0.003 U	0.003 U	0.0058 {AB}	0.003 U	0.003 U	0.0014 J	0.003 U	0.003 U	0.003 U	0.003 U
Magnesium	mg/L	-	22	-	18	18	-	-	-	-	-
Manganese	mg/L	0.06 {AB}	0.13 {AB}	0.48 {AB}	0.49 {AB}	0.5 {AB}	0.3 {AB}	0.11 {AB}	0.11 {AB}	0.42 {AB}	0.27 {AB}
Mercury	mg/L	0.04 U	0.04 U	0.0002 U	0.04 U	0.04 U	0.0002 U	0.0002 U	0.04 U	0.0002 U	0.0002 U
Nickel	mg/L	0.0016 J	0.0021 J	0.011 J	0.0029 J	0.0029 J	0.0023 J	0.02 U	0.0018 J	0.0017 J	0.0018 J
Potassium	mg/L	-	2.6 J	-	2.2 J	2.3 J	-	-	-	-	-
Selenium	mg/L	0.005 U	0.005 U	0.005 U	0.00094 J	0.00083 J	0.0017 J	0.0015 J	0.003 J	0.005 U	0.005 U
Silver	mg/L	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.000018 J	0.0002 U	0.0002 U	0.0002 U
Sodium	mg/L	-	120	-	190 {A}	200 {A}	-	-	-	-	-
Thallium	mg/L	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.00023 J	0.002 U	0.00021 J	0.002 U	0.002 U
Vanadium	mg/L	0.004 U	0.004 U	0.014 {A}	0.004 U	0.004 U	0.00062 J	0.004 U	0.004 U	0.004 U	0.004 U
Zinc	mg/L	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U

Notes:

- Background Levels for Site

- Least restrictive background level for four adjacent sites

- Concentration exceeds generic Part 201 clean up criteria (update September 28, 2012) and least restrictive background level for four adjacent sites

- Concentration exceeds generic Part 201 clean up criteria (updated September 28, 2012) and Site Specific Background Level

- Concentration exceeds generic Part 201 clean up criteria (updated September 28, 2012) but NOT Site Specific Background Level

{A,B,C} - Letter reference for Part 201 criteria exceeded. See Table 3.9 for definitions.

Perimeter Status (1) - N - non-perimeter, Y - perimeter

mg/L - miligram per liter

U - Not detected at the associated reporting limit.

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TABLE 3.11

COMPARISON TO SITE SPECIFIC BACKGROUND LEVELS - GROUNDWATER
2013 RFI REPORT
FORMER GENERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation		*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*
Perimeter Status (1)		*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*
Sample Location		*CRA-705M [1]*	*CRA-705M [1]*	*CRA-705M [1]*	*CRA-706M [1]*	*CRA-706M [1]*	*CRA-706M [1]*	*CRA-709M [1]*	*CRA-709M [1]*	*CRA-710M [1]*	*CRA-710M [1]*
Sample Identification		*GW-17358-012412-DR-031*	*GW-17358-080312-CB-001*	*GW-17358-041613-DR-115*	*GW-17358-012412-DR-030*	*GW-17358-080312-CB-002*	*GW-17358-041613-DR-114*	*GW-17358-012312-DR-026*	*GW-17358-041613-DR-112*	*GW-17358-012312-DR-025*	*GW-17358-041613-DR-111*
Sample Date		*1/24/2012*	*8/3/2012*	*4/16/2013*	*1/24/2012*	*8/3/2012*	*4/16/2013*	*1/23/2012*	*4/16/2013*	*1/23/2012*	*4/16/2013*
Sample Type											
	Units										
Metals											
Aluminum	mg/L	0.42 {AB}	0.067 {AB}	0.027 J	0.44 {AB}	0.05 U	0.0078 J	0.33 {AB}	0.14 J{AB}	35 {AB}	0.024 J
Antimony	mg/L	0.00056 J	0.00027 J	0.002 U	0.0004 J	0.00026 J	0.002 U	0.00029 J	0.002 U	0.0022	0.002 U
Arsenic	mg/L	0.0011 J	0.0022 J	0.00048 J	0.0011 J	0.0017 J	0.00086 J	0.0026 J	0.0017 J	0.017 {ABC}	0.0012 J
Barium	mg/L	0.047 J	0.082 J	0.043 J	0.066 J	0.066 J	0.067 J	0.14	0.16	0.29	0.077 J
Beryllium	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.002	0.001 U
Cadmium	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0002 J	0.001 U
Calcium	mg/L	85	-	-	92	-	-	-	-	-	-
Chromium	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.021 {C}	0.01 U
Chromium III (trivalent)	mg/L	0.01 U	-	-	-	-	-	0.01 U	-	-	-
Chromium VI (hexavalent)	mg/L	0.01 UJ	-	-	-	-	-	0.01 U	-	-	-
Cobalt	mg/L	0.00057 J	0.02 U	0.00022 J	0.00061 J	0.02 U	0.00029 J	0.0019 J	0.0012 J	0.0071 J	0.0003 J
Copper	mg/L	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.033 {C}	0.004 U
Iron	mg/L	0.45 {AB}	0.23	0.2 U	0.6 {AB}	0.15 J	0.18 J	0.84 {AB}	0.96 {AB}	**24 {AB}**	0.24
Lead	mg/L	0.00032 J	0.003 U	0.003 U	0.00043 J	0.003 U	0.003 U	0.00036 J	0.00034 J	0.027 {AB}	0.0002 J
Magnesium	mg/L	16	-	-	18	-	-	-	-	-	-
Manganese	mg/L	0.059 {AB}	0.1 {AB}	0.061 {AB}	0.11 {AB}	0.11 {AB}	0.11 {AB}	0.28 {AB}	0.28 {AB}	0.25 {AB}	0.11 {AB}
Mercury	mg/L	0.04 U	0.0002 U	0.0002 U	0.04 U	0.0002 U	0.0002 U	0.04 U	0.0002 U	0.04 U	0.0002 U
Nickel	mg/L	0.0026 J	0.0014 J	0.0014 J	0.0024 J	0.0012 J	0.0014 J	0.0026 J	0.0021 J	0.02	0.0013 J
Potassium	mg/L	1.2 J	-	-	1.4 J	-	-	-	-	-	-
Selenium	mg/L	0.0011 J	0.00077 J	0.00039 J	0.005 U	0.005 U	0.00061 J	0.005 U	0.005 U	0.0046 J	0.00099 J
Silver	mg/L	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Sodium	mg/L	34	-	-	40	-	-	-	-	-	-
Thallium	mg/L	0.00054 J	0.00025 J	0.002 U	0.002 U	0.002 U	0.002 U	0.00018 J	0.002 U	0.00061 J	0.002 U
Vanadium	mg/L	0.0013 J	0.004 U	0.004 U	0.0014 J	0.004 U	0.00015 J	0.001 J	0.0005 J	0.047 {AC}	0.004 U
Zinc	mg/L	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.081	0.05 U

Notes:

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COMPARISON TO SITE SPECIFIC BACKGROUND LEVELS - GROUNDWATER
2013 RFI REPORT
FORMER GENERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation		*NORTH PERIMETER*	*NORTH PERIMETER*	*NORTH PERIMETER*	*NOT REQUIRED*	*QA/QC*	*WEST01*	*WEST01*	*WEST01*	*WEST01*	*WEST01*
Perimeter Status (1)		*Y*	*Y*	*Y*	*NA*	*N*	*N*	*N*	*N*	*N*	*N*
Sample Location		*CRA-833M [1]*	*CRA-833M [1]*	*CRA-834M [1]*	*RT-3*	*Equipment Blank*	*CRA-720I*	*CRA-720I*	*CRA-735I*	*CRA-735I*	*CRA-736I*
Sample Identification		*GW-17358-012412-DR-032*	*GW-17358-041713-DR-118*	*GW-17358-012412-DR-033*	*K-35-RT-3*	*EB-17358-042512-CB-1102*	*GW-17358-042412-DR-1092*	*GW-17358-041213-JY-098*	*GW-17358-042512-DR-1094*	*GW-17358-041213-DR-099*	*GW-17358-042512-DR-1093*
Sample Date		*1/24/2012*	*4/17/2013*	*1/24/2012*	*10/10/2000*	*4/25/2012*	*4/24/2012*	*4/12/2013*	*4/25/2012*	*4/12/2013*	*4/25/2012*
Sample Type						*(other)*					
	Units										
Metals											
Aluminum	mg/L	0.43 {AB}	0.14 {AB}	0.1 {AB}	-	0.33 {AB}	0.035 J	0.05 U	0.047 J	0.05 U	0.026 J
Antimony	mg/L	0.00028 J	0.002 U	0.00084 J	-	0.002 U	0.00028 J	0.002 U	0.00025 J	0.002 U	0.00027 J
Arsenic	mg/L	0.0038 J	0.0024 J	0.003 J	-	0.005 U	0.0048 J	0.018 {BC}	0.0091	0.0059	0.0077
Barium	mg/L	0.11	0.097 J	0.062 J	-	0.0026 J	0.47	0.26	0.43	0.26	0.32
Beryllium	mg/L	0.001 U	0.00028 J	0.001 U	0.0005 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Cadmium	mg/L	0.001 U	0.00017 J	0.001 U	0.0003	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Calcium	mg/L	-	-	-	-	-	-	-	-	-	-
Chromium	mg/L	0.01 U	0.01 U	0.01 U	0.011	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Chromium III (trivalent)	mg/L	-	-	-	-	-	0.01 U	-	-	-	-
Chromium VI (hexavalent)	mg/L	-	-	-	-	-	0.01 U	-	-	-	-
Cobalt	mg/L	0.00047 J	0.00032 J	0.00055 J	-	0.02 U	0.001 J	0.0002 J	0.00056 J	0.000064 J	0.02 U
Copper	mg/L	0.004 U	0.0017 J	0.004 U	0.019	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U
Iron	mg/L	0.76 {AB}	0.99 {AB}	0.15 J	-	0.11 J	0.43 {AB}	2.9 {B}	1.1 {AB}	0.38 {B}	0.2 U
Lead	mg/L	0.00035 J	0.00045 J	0.00033 J	0.014 {AB}	0.003 U	0.0011 J	0.0022 J	0.0025 J	0.0012 J	0.003 U
Magnesium	mg/L	-	-	-	-	-	-	-	-	-	-
Manganese	mg/L	0.19 {AB}	0.21 {AB}	0.051 {AB}	-	0.0031 J	0.28 {AB}	0.12 {B}	0.17 {AB}	0.09 {B}	0.21 {AB}
Mercury	mg/L	0.04 U	0.0002 U	0.04 U	0.0002 U	0.04 U	0.04 U	0.0002 U	0.08 U	0.0002 U	0.04 U
Nickel	mg/L	0.0014 J	0.0013 J	0.0029 J	0.036	0.0002 J	0.0021 J	0.02 U	0.0013 J	0.02 U	0.02 U
Potassium	mg/L	-	-	-	-	-	-	-	-	-	-
Selenium	mg/L	0.005 U	0.00027 J	0.005 U	-	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Silver	mg/L	0.0002 U	0.000013 J	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Sodium	mg/L	-	-	-	-	-	-	-	-	-	-
Thallium	mg/L	0.00017 J	0.0012 J	0.002 U	-	0.002 U	0.00015 J	0.002 U	0.00028 J	0.002 U	0.0005 J
Vanadium	mg/L	0.0012 J	0.0006 J	0.0015 J	-	0.00045 J	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U
Zinc	mg/L	0.05 U	0.05 U	0.05 U	0.055	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U

Notes:

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COMPARISON TO SITE SPECIFIC BACKGROUND LEVELS - GROUNDWATER
2013 RFI REPORT
FORMER GENERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation		*WEST01*	*WEST01*	*WEST01*	*WEST01*	*WEST01*	*WEST01*	*WEST01*	*WEST01*	*WEST01*	*WEST01*	*WEST01*
Perimeter Status (1)		*N*	*Y*	*Y*	*Y*	*N*	*N*	*N*	*N*	*N*	*N*	*N*
Sample Location		*CRA-7361*	*CRA-401M-D [1]*	*CRA-401M-D [1]*	*CRA-401M-D [1]*	*MW-02 [2]*	*MW-10 [2]*	*CRA-405M-S*	*CRA-405M-S*	*CRA-405M-S*	*CRA-713M*	*CRA-713M*
Sample Identification		*GW-17358-041213-DR-100*	*WG-17358-012507-JY-071*	*GW-17358-032108-DR-018*	*GW-17358-091010-DR-002*	*MW-2*	*DYM-MW-10*	*WG-17358-012207-EV-032*	*GW-17358-031908-LJ-008*	*GW-17358-091710-JY-051*	*GW-17358-042512-DR-1095*	*GW-17358-041613-DR-113*
Sample Date		*4/12/2013*	*1/25/2007*	*3/21/2008*	*9/10/2010*	*1/1/1998*	*10/11/2000*	*1/22/2007*	*3/19/2008*	*9/17/2010*	*4/25/2012*	*4/16/2013*
Sample Type												
	Units											
Metals												
Aluminum	mg/L	0.05 U	**2.19 {AB}**	0.05 U	0.173 {AB}	-	-	0.05 U	0.0316 J	0.05 U	0.24 {AB}	0.24 J{B}
Antimony	mg/L	0.002 U	0.0011 J	0.002 U	0.002 U	-	-	0.0014 J	0.002 U	0.002 U	0.00035 J	0.002 U
Arsenic	mg/L	0.012 {BC}	0.005 U	0.005 U	0.005 U	0.002 U	-	0.005 U	0.005 U	0.005 U	0.00086 J	0.00052 J
Barium	mg/L	0.28	0.124	0.141	0.0925 J	0.06	-	0.817	0.626	0.934	0.069 J	0.055 J
Beryllium	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	-	0.0018	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Cadmium	mg/L	0.001 U	0.0005 U	0.0005 U	0.0005 U	0.02 U	0.019 {ABC}	0.0005 U	0.0005 U	0.0005 U	0.001 U	0.000055 J
Calcium	mg/L	-	-	-	-	-	-	-	-	-	-	-
Chromium	mg/L	0.01 U	0.010	0.005 U	0.005 U	0.03 U	2 {ABC}	0.005 U	0.005 U	0.005 U	0.01 U	0.0009 J
Chromium III (trivalent)	mg/L	-	-	-	-	-	-	-	-	-	0.01 U	-
Chromium VI (hexavalent)	mg/L	-	-	-	-	-	-	-	-	-	0.01 U	-
Cobalt	mg/L	0.000069 J	0.0021 J	0.007 U	0.007 U	-	-	0.007 U	0.007 U	0.007 U	0.00066 J	0.00081 J
Copper	mg/L	0.004 U	0.0079	0.00068 J	0.0013 J	0.02 U	10 {ABC}	0.00088 J	0.002 U	0.00049 J	0.004 U	0.004 U
Iron	mg/L	1.3 {B}	5.18 {AB}	0.1 U	0.344 {AB}	-	-	**10.2 {AB}**	6.82 {AB}	8.28 {AB}	0.19 J	0.39 {B}
Lead	mg/L	0.0011 J	0.0021 J	0.003 U	0.003 U	0.02 {AB}	11 {ABC}	0.003 U	0.003 U	0.003 U	0.003 U	0.00059 J
Magnesium	mg/L	-	-	-	-	-	-	-	-	-	-	-
Manganese	mg/L	0.15 {B}	0.327 {AB}	0.198 {AB}	0.333 {AB}	-	-	0.234 {AB}	0.206 {AB}	0.222 {AB}	0.14 {AB}	0.11 {B}
Mercury	mg/L	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.001 U	0.0002 U	0.00013 J{C}	0.0002 U	0.04 U	0.0002 U
Nickel	mg/L	0.02 U	0.0063 J	0.02 U	0.02 U	0.05 U	0.51 {ABC}	0.02 U	0.02 U	0.02 U	0.0037 J	0.0025 J
Potassium	mg/L	-	-	-	-	-	-	-	-	-	-	-
Selenium	mg/L	0.005 U	0.002 U	0.002 U	0.002 U	-	-	0.0011 J	0.002 U	0.002 U	0.0025 J	0.0043 J
Silver	mg/L	0.0002 U	0.0002 U	0.0002 U	0.0002 U	-	0.01 {C}	0.0002 UJ	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Sodium	mg/L	-	-	-	-	-	-	-	-	-	-	-
Thallium	mg/L	0.002 U	0.00013 J	0.00023 J	0.001 U	-	-	0.001 U	0.001 U	0.001 U	0.00071 J	0.002 U
Vanadium	mg/L	0.004 U	0.0071 {A}	0.004 U	0.004 U	-	-	0.004 U	0.004 U	0.004 U	0.0011 J	0.0013 J
Zinc	mg/L	0.05 U	0.0253 U	0.01 U	0.0044 J	0.11	3.2 {AC}	0.0127 U	0.01 U	0.01 U	0.05 U	0.05 U

Notes:

- Background Levels for Site

- Least restrictive background level for four adjacent sites

- Concentration exceeds generic Part 201 clean up criteria (update September 28, 2012) and least restrictive background level for four adjacent sites

- Concentration exceeds generic Part 201 clean up criteria (updated September 28, 2012) and Site Specific Background Level

- Concentration exceeds generic Part 201 clean up criteria (updated September 28, 2012) but NOT Site Specific Background Level

{A,B,C} - Letter reference for Part 201 criteria exceeded. See Table 3.9 for definitions.

Perimeter Status (1) - N - non-perimeter, Y - perimeter

mg/L - miligram per liter

U - Not detected at the associated reporting limit.

J - Estimated concentration.

UJ - Not detected; associated reporting limit is estimated.

TABLE 3.11

COMPARISON TO SITE SPECIFIC BACKGROUND LEVELS - GROUNDWATER
2013 RFI REPORT
FORMER GENERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation		*WEST01*	*WEST01*	*WEST01*	*WEST01*	*WEST01*	*WEST01*	*WEST01*	*WEST01*	*WEST01*	*WEST01*	*WEST01*
Perimeter Status (1)		*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*	*Y*
Sample Location		*CRA-050M [1]*	*CRA-052M [1]*	*CRA-052M [1]*	*CRA-052M [1]*	*CRA-052M [1]*	*CRA-052M [1]*	*CRA-402M-S [1]*	*CRA-402M-S [1]*	*CRA-623M [1]*	*CRA-623M [1]*	*CRA-623M [1]*
Sample Identification		*GW-17358-081804-DCR-713*	*GW-17358-081804-DCR-714*	*WG-17358-012507-DR-073*	*GW-17358-032108-DR-019*	*GW-17358-032108-DR-020*	*GW-17358-091010-DR-004*	*WG-17358-012507-EV-072*	*GW-17358-091010-DR-001*	*GW-17358-032808-DS-062*	*GW-17358-032808-DS-063*	
Sample Date		*8/18/2004*	*8/18/2004*	*1/25/2007*	*3/21/2008*	*3/21/2008*	*9/10/2010*	*1/25/2007*	*9/10/2010*	*3/28/2008*	*3/28/2008*	
Sample Type						*Duplicate*						*Duplicate*
	Units											
Metals												
Aluminum	mg/L	0.05 U	0.05 U	0.05 U	0.148 {AB}	0.104 {AB}	0.0668 {AB}	0.05 U	0.05 U	0.05 U	0.05 U	
Antimony	mg/L	0.00015 J	0.00013 J	0.00015 J	0.002 U	0.002 U	0.002 U	0.00073 J	0.00043 J	0.002 U	0.002 U	
Arsenic	mg/L	0.01 U	0.018 {ABC}	0.015 {ABC}	0.02 {ABC}	0.0208 {ABC}	0.023 {ABC}	0.005 U	0.005 U	0.005 U	0.005 U	
Barium	mg/L	0.1	0.36	0.318	0.312	0.334	0.359	0.152	0.268	0.164	0.162	
Beryllium	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	
Cadmium	mg/L	0.00008 J	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.00016 J	0.00018 J	
Calcium	mg/L	-	-	-	-	-	-	-	-	-	-	
Chromium	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	
Chromium III (trivalent)	mg/L	-	-	-	-	-	-	-	-	-	-	
Chromium VI (hexavalent)	mg/L	-	-	-	-	-	-	-	-	-	-	
Cobalt	mg/L	0.007 U	0.007 U	0.007 U	0.007 U	0.007 U	0.007 U	0.007 U	0.007 U	0.0021 J	0.002 J	
Copper	mg/L	0.002 U	0.002 U	0.002 U	0.00046 J	0.00054 J	0.002 U	0.0037 U	0.0032	0.00063 J	0.00068 J	
Iron	mg/L	1.7 {AB}	7 {AB}	3.14 {AB}	4.17 {AB}	4.2 {AB}	4.59 {AB}	0.1 U	0.1 U	0.9 {AB}	0.915 {AB}	
Lead	mg/L	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	
Magnesium	mg/L	-	-	-	-	-	-	-	-	-	-	
Manganese	mg/L	0.015 U	0.16 {AB}	0.109 {AB}	0.118 {AB}	0.123 {AB}	0.123 {AB}	0.0852 {AB}	0.244 {AB}	0.309 {AB}	0.31 {AB}	
Mercury	mg/L	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	
Nickel	mg/L	0.025 U	0.025 U	0.02 U	0.02 U	0.02 U	0.02 U	0.0027 J	0.0043 J	0.0203	0.0192 J	
Potassium	mg/L	-	-	-	-	-	-	-	-	-	-	
Selenium	mg/L	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.0048	0.002 U	0.0017 J	0.0018 J	
Silver	mg/L	0.0005 U	0.0005 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	
Sodium	mg/L	-	-	-	-	-	-	-	-	-	-	
Thallium	mg/L	0.001 U	0.00015 J	0.001 U	0.001 U	0.001 U	0.001 U	0.000058 J	0.001 U	0.001 U	0.001 U	
Vanadium	mg/L	0.007 U	0.007 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	
Zinc	mg/L	0.01 U	0.018 U	0.0117 U	0.01 U	0.01 U	0.0086 J	0.01 U	0.0038 J	0.0093 J	0.0098 J	

Notes:

- Background Levels for Site

- Least restrictive background level for four adjacent sites

- Concentration exceeds generic Part 201 clean up criteria (update September 28, 2012) and least restrictive background level for four adjacent sites

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Perimeter Status (1) - N - non-perimeter, Y - perimeter

mg/L - miligram per liter

U - Not detected at the associated reporting limit.

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TABLE 3.11

COMPARISON TO SITE SPECIFIC BACKGROUND LEVELS - GROUNDWATER
2013 RFI REPORT
FORMER GENERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation		*WEST01*	*WEST02*	*WEST02*	*WEST02*	*WEST02*	*WEST02*	*WEST02*	*WEST02*	*WEST02*	*WEST02*	*WEST02*
Perimeter Status (1)		*Y*	*Y*	*Y*	*Y*	*N*	*N*	*N*	*N*	*N*	*Y*	*Y*
Sample Location		*CRA-623M [1]*	*CRA-726D [1]*	*CRA-726D [1]*	*CRA-726D [1]*	*CRA-731I*	*CRA-731I*	*CRA-732I*	*CRA-732I*	*CRA-732I*	*CRA-726I [1]*	*CRA-726I [1]*
Sample Identification		*GW-17358-091710-JY-052*	*'358-042512-C*	*GW-17358-041013-DR-081*	*GW-17358-041113-DR-087*	*GW-17358-041712-DR-1043*	*GW-17358-040113-DR-006*	*GW-17358-041812-DR-1050*	*GW-17358-041812-DR-1051*	*GW-17358-040113-JY-002*	*GW-17358-042512-CB-1099*	*GW-17358-041013-DR-080*
Sample Date		*9/17/2010*	*4/25/2012*	*4/10/2013*	*4/11/2013*	*4/17/2012*	*4/1/2013*	*4/18/2012*	*4/18/2012*	*4/1/2013*	*4/25/2012*	*4/10/2013*
Sample Type									*Duplicate*			
	Units											
Metals												
Aluminum	mg/L	0.0192 J	0.2 {AB}	3.5 J{AB}	29 J{AB}	0.06 {AB}	0.019 J	0.021 J	0.024 J	0.05 U	0.34 {AB}	0.019 J
Antimony	mg/L	0.002 U	0.00041 J	0.002 U	0.002 U	0.002 U	0.002 U	0.00031 J	0.00044 J	0.002 U	0.0042	0.002 U
Arsenic	mg/L	0.0118 {ABC}	0.00086 J	0.012 {ABC}	0.02 {ABC}	**0.033 {ABC}**	**0.04 {BC}**	0.015 {ABC}	0.016 {ABC}	0.018 {BC}	**0.072 {ABC}**	0.0008 J
Barium	mg/L	0.184	0.073 J	0.077 J	0.28	0.1	0.082 J	0.14	0.14	0.12	0.73	0.11
Beryllium	mg/L	0.001 U	0.001 U	0.00022 J	0.0014	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.00057 J
Cadmium	mg/L	0.0005 U	0.001 U	0.00014 J	0.00031 J	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.00033 J
Calcium	mg/L	-	-	-	-	-	-	-	-	-	-	-
Chromium	mg/L	0.005 U	0.01 U	0.008 J	0.053 {C}	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Chromium III (trivalent)	mg/L	-	-	-	-	-	-	-	-	-	-	-
Chromium VI (hexavalent)	mg/L	-	-	-	-	-	-	-	-	-	-	-
Cobalt	mg/L	0.007 U	0.02 U	0.0028 J	0.019 J	0.00065 J	0.00026 J	0.00055 J	0.00068 J	0.00069 J	0.0036 J	0.00049 J
Copper	mg/L	0.00058 J	0.004 U	0.0067 J	0.034 {C}	0.004 U	0.0004 J	0.004 U	0.0014 J	0.004 U	0.0007 J	0.004 U
Iron	mg/L	2.06 {AB}	0.14 J	5.2 {AB}	**44 {AB}**	2.2 {AB}	1.2 {B}	0.22	0.24	0.34 {B}	4.4 {AB}	0.2 U
Lead	mg/L	0.003 U	0.003 U	0.0038	0.015 {AB}	0.00092 J	0.00033 J	0.003 U	0.00023 J	0.003 U	0.00044 J	0.0004 J
Magnesium	mg/L	-	-	-	-	-	-	-	-	-	-	-
Manganese	mg/L	0.488 {AB}	0.056 {AB}	0.072 {AB}	0.69 {AB}	0.053 {AB}	0.04 J	0.12 {AB}	0.12 {AB}	0.12 {B}	3.1 {AB}	0.052 {AB}
Mercury	mg/L	0.0002 U	0.04 U	0.0002 U	0.0002 U	0.04 U	0.0002 U	0.04 U	0.04 U	0.0002 U	0.04 U	0.0002 U
Nickel	mg/L	0.0118 J	0.0015 J	0.0092 J	0.055	0.046	0.031	0.0016 J	0.0018 J	0.02 U	0.024	0.0012 J
Potassium	mg/L	-	-	-	-	-	-	-	-	-	-	-
Selenium	mg/L	0.002 U	0.00064 J	0.005 U	0.0026 J	0.005 U	0.005 U	0.005 U	0.00057 J	0.005 U	0.005 U	0.0012 J
Silver	mg/L	0.0002 U	0.0002 U	0.0002 U	0.000089 J	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Sodium	mg/L	-	-	-	-	-	-	-	-	-	-	-
Thallium	mg/L	0.001 U	0.002 U	0.00087 J	0.00083 J	0.002 U	0.002 U	0.002 U	0.002 U	0.00024 J	0.002 U	0.0013 J
Vanadium	mg/L	0.004 U	0.00061 J	0.01 {A}	0.078 {ABC}	0.0017 J	0.0019 J	0.004 U	0.004 U	0.004 U	0.0014 J	0.004 U
Zinc	mg/L	0.0034 J	0.05 U	0.16	0.15 U	0.05 U	0.05 U	0.05 U	0.0073 J	0.05 U	0.05 U	0.05 U

Notes:

- Background Levels for Site

- Least restrictive background level for four adjacent sites

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Perimeter Status (1) - N - non-perimeter, Y - perimeter

mg/L - miligram per liter

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TABLE 3.11

COMPARISON TO SITE SPECIFIC BACKGROUND LEVELS - GROUNDWATER
2013 RFI REPORT
FORMER GENERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation		*WEST02*	*WEST02*	*WEST02*	*WEST02*	*WEST02*	*WEST02*	*WEST02*	*WEST02*	*WEST02*	*WEST02*
Perimeter Status (1)		*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*
Sample Location		*CRA-529M*	*CRA-529M*	*CRA-529M*	*CRA-529M*	*CRA-529M*	*CRA-529M*	*CRA-534M*	*CRA-721M*	*CRA-721M*	*CRA-722M*
Sample Identification		*WG-17358-011707-DR-004*	*WG-17358-011707-DR-005*	*GW-17358-031908-LJ-007*	*GW-17358-091710-JY-053*	*GW-17358-041812-DR-1052*	*GW-17358-040113-JY-001*	*WG-17358-011707-DR-003*	*GW-17358-042412-DR-1087*	*GW-17358-041213-JY-097*	*GW-17358-042412-DR-1091*
Sample Date		*1/17/2007*	*1/17/2007*	*3/19/2008*	*9/17/2010*	*4/18/2012*	*4/1/2013*	*1/17/2007*	*4/24/2012*	*4/12/2013*	*4/24/2012*
Sample Type			*Duplicate*								
	Units										
Metals											
Aluminum	mg/L	0.05 U	0.05 U	0.0323 J	0.0497 J	0.05 U	0.05 U	0.05 U	0.032 J	0.13 J{B}	**1.4 {AB}**
Antimony	mg/L	0.002 U	0.002 U	0.002 U	0.002 U	0.00018 J	0.002 U	0.002 U	0.00073 J	0.002 U	0.0005 J
Arsenic	mg/L	**0.0383 {ABC}**	**0.038 {ABC}**	**0.0594 {ABC}**	**0.0489 {ABC}**	**0.056 {ABC}**	**0.048 {BC}**	0.0058	0.0008 J	0.005 U	0.0013 J
Barium	mg/L	0.37	0.363	0.558	0.736	0.6	0.61	0.261	0.09 J	0.28	0.26
Beryllium	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Cadmium	mg/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.001 U	0.001 U	0.0005 U	0.001 U	0.000057 J	0.001 U
Calcium	mg/L	-	-	-	-	-	-	-	-	-	-
Chromium	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.01 U	0.0015 J	0.005 U	0.01 U	0.0021 J	0.0041 J
Chromium III (trivalent)	mg/L	0.01 U	-	-	-	-	-	-	-	-	0.01 U
Chromium VI (hexavalent)	mg/L	0.01 U	-	-	-	-	-	-	-	-	0.0024 J
Cobalt	mg/L	0.007 U	0.007 U	0.007 U	0.007 U	0.00057 J	0.00052 J	0.007 U	0.00082 J	0.0003 J	0.0013 J
Copper	mg/L	0.002 U	0.002 U	0.002 U	0.00042 J	0.0012 J	0.004 U	0.002 U	0.004 U	0.004 U	0.0043 U
Iron	mg/L	**14.4 {AB}**	**14.1 {AB}**	**18.2 {AB}**	**22.8 {AB}**	**22 {AB}**	**20 {B}**	2.76 {AB}	0.2	0.2 U	1.9 {AB}
Lead	mg/L	0.003 U	0.003 U	0.003 U	0.003 U	0.00066 J	0.003 U	0.003 U	0.003 U	0.00022 J	0.0041 {AB}
Magnesium	mg/L	-	-	-	-	-	-	-	-	-	-
Manganese	mg/L	0.275 {AB}	0.269 {AB}	0.227 {AB}	0.272 {AB}	0.29 {AB}	0.28 {B}	0.316 {AB}	0.17 {AB}	0.074 {B}	0.13 {AB}
Mercury	mg/L	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.04 U	0.0002 U	0.0002 U	0.04 U	0.0002 U	0.04 U
Nickel	mg/L	0.0064 J	0.0064 J	0.0035 J	0.0042 J	0.0044 J	0.0032 J	0.0185 J	0.0016 J	0.0022 J	0.0037 J
Potassium	mg/L	-	-	-	-	-	-	-	-	-	-
Selenium	mg/L	0.002 U	0.00065 J	0.002 U	0.002 U	0.005 U	0.005 U	0.00099 J	0.0014 J	0.00079 J	0.00071 J
Silver	mg/L	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Sodium	mg/L	-	-	-	-	-	-	-	-	-	-
Thallium	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.002 U	0.00029 J	0.000041 J	0.00043 J	0.002 U	0.002 U
Vanadium	mg/L	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.00016 J	0.0034 J
Zinc	mg/L	0.0114 U	0.0121 U	0.01 U	0.0086 J	0.0061 J	0.05 U	0.01 U	0.05 U	0.05 U	0.05 U

Notes:

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2013 RFI REPORT
FORMER GENERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Site Section Designation		*WEST02*	*WEST02*	*WEST02*	*WEST02*	*WEST03*	*WEST03*	*WEST03*	*WEST03*	*WEST03*	*WEST03*	*WEST03*
Perimeter Status (1)		*N*	*N*	*Y*	*Y*	*N*	*N*	*N*	*N*	*N*	*N*	*N*
Sample Location		*CRA-737M*	*CRA-737M*	*CRA-600M [1]*	*CRA-600M [1]*	*CRA-256M*	*CRA-450M-D*	*CRA-450M-D*	*CRA-452M-D*	*CRA-452M-D*	*CRA-452M-D*	*CRA-452M-D*
Sample Identification		*GW-17358-041712-DR-1044*	*GW-17358-040113-DR-007*	*7358-032808-E*	*GW-17358-091310-DR-006*	*MW-5*	*GW-17358-062204-MM-561*	*GW-17358-062204-MM-562*	*GW-17358-062204-MM-563*	*WG-17358-012207-EV-033*	*GW-17358-032008-LJ-013*	*GW-17358-091610-JY-041*
Sample Date		*4/17/2012*	*4/1/2013*	*3/28/2008*	*9/13/2010*	*8/1/1992*	*6/22/2004*	*6/22/2004*	*6/22/2004*	*1/22/2007*	*3/20/2008*	*9/16/2010*
Sample Type								*Duplicate*				
	Units											
Metals												
Aluminum	mg/L	0.05 U	0.05 U	0.0282 J	0.05 U	-	0.05 U	0.05 U	0.29 {AB}	0.516 {AB}	0.0628 {AB}	**0.704 {AB}**
Antimony	mg/L	0.002 U	0.002 U	0.002 U	0.002 U	-	0.002 U	0.002 U	0.002 U	0.0016 J	0.002 U	0.002 U
Arsenic	mg/L	0.0021 J	0.0014 J	0.0062	0.0135 {ABC}	-	0.01	0.0089 J	0.01 U	**0.0261 [ABC]**	0.0181 {ABC}	0.0134 {ABC}
Barium	mg/L	0.28	0.13	0.129	0.0852 J	-	0.27	0.26	0.09 J	0.149	0.157	0.218
Beryllium	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	-	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Cadmium	mg/L	0.001 U	0.001 U	0.0005 U	0.0005 U	0 U	0.00018 J	0.00017 J	0.0005 U	0.0005 U	0.0005 U	0.0005 U
Calcium	mg/L	-	-	-	-	-	-	-	-	-	-	-
Chromium	mg/L	0.01 U	0.01 U	0.005 U	0.005 U	0 U	0.005 U	0.005 U	0.0025 J	0.0018 J	0.005 U	0.0022 J
Chromium III (trivalent)	mg/L	0.01 U	-	-	-	-	-	-	-	-	-	-
Chromium VI (hexavalent)	mg/L	0.01 U	-	-	-	-	-	-	-	-	-	-
Cobalt	mg/L	0.0018 J	0.0018 J	0.007 U	0.007 U	-	0.028	0.027	0.0034 J	0.007 U	0.007 U	0.007 U
Copper	mg/L	0.004 U	0.00088 J	0.00034 J	0.002 U	-	0.0043 U	0.0043 U	0.0034 U	0.002 U	0.002 U	0.0022 U
Iron	mg/L	**20 [AB]**	0.98 {B}	1.14 {AB}	1.67 {AB}	1.2 {AB}	2.9 {AB}	3.1 {AB}	1.1 {AB}	4.02 {AB}	2.98 {AB}	4.21 {AB}
Lead	mg/L	0.003 U	0.003 U	0.003 U	0.003 U	0 U	0.0033	0.0027 J	0.003 U	0.003 U	0.003 U	0.003 U
Magnesium	mg/L	-	-	-	-	-	-	-	-	-	-	-
Manganese	mg/L	0.56 {AB}	0.33 {B}	0.544 {AB}	0.152 {AB}	-	0.79 U	0.75 U	0.29 U	0.0949 {AB}	0.059 {AB}	0.0897 {AB}
Mercury	mg/L	0.04 U	0.0002 U	0.0002 U	0.0002 U	-	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Nickel	mg/L	0.0032 J	0.0053 J	0.02 U	0.02 U	0.017	**0.16 [AB]**	**0.15 [AB]**	0.023 J	0.0156 J	0.0293	0.03
Potassium	mg/L	-	-	-	-	-	-	-	-	-	-	-
Selenium	mg/L	0.005 U	0.005 U	0.002 U	0.002 U	-	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
Silver	mg/L	0.0002 U	0.0002 U	0.0002 U	0.0002 U	-	0.0005 U	0.0005 U	0.0005 U	0.0002 U	0.0002 U	0.0002 U
Sodium	mg/L	-	-	-	-	-	-	-	-	-	-	-
Thallium	mg/L	0.002 U	0.002 U	0.001 U	0.001 U	-	0.001 U	0.001 U	0.001 U	0.00004 J	0.001 U	0.001 U
Vanadium	mg/L	0.004 U	0.004 U	0.004 U	0.004 U	-	0.007 U	0.007 U	0.007 U	0.004 U	0.004 U	0.002 J
Zinc	mg/L	0.05 U	0.05 U	0.0045 J	0.01 U	0 U	0.023 U	0.026	0.015 U	0.0147 U	0.01 U	0.0157 U

Notes:

- Background Levels for Site

- Least restrictive background level for four adjacent sites

- Concentration exceeds generic Part 201 clean up criteria (update September 28, 2012) and least restrictive background level for four adjacent sites

- Concentration exceeds generic Part 201 clean up criteria (updated September 28, 2012) and Site Specific Background Level

- Concentration exceeds generic Part 201 clean up criteria (updated September 28, 2012) but NOT Site Specific Background Level

{A,B,C} - Letter reference for Part 201 criteria exceeded. See Table 3.9 for definitions.

Perimeter Status (1) - N - non-perimeter, Y - perimeter

mg/L - miligram per liter

U - Not detected at the associated reporting limit.

J - Estimated concentration.

UJ - Not detected; associated reporting limit is estimated.

TABLE 3.12

PART 201 CRITERIA EXCEEDANCES – DEEP WELLS
2013 RFI REPORT
FORMER GENERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Location		Residential	Non-Residential	Groundwater	Residential	Non-Residential	Groundwater	Water	Flammability and	Acute	*CRA-704D*			*CRA-726D*		
Site Section Designation		Drinking Water	Drinking Water	Surface Water Interface	Groundwater Volatilization to Indoor Air Inhalation	Groundwater Volatilization to Indoor Air Inhalation	Contact	Solubility	Explosivity Screening Levels	Inhalation Screening Levels	*North Perimeter*			*WEST02*		
Sample Identification (GW-17358)		a	b	c	d	e	f	g	h	i	*4/25/2012 042512-JY-1097*	*4/10/2013 041013-JY-075*	*4/11/2013 041113-DR-085*	*4/25/2012 042512-CB-1100*	*4/10/2013 041013-DR-081*	*4/11/2013 041113-DR-087*
Sample Date																
	Units															
Field Parameters																
Turbidity, field	NTU										289	40.8	40.3	> 1000	230	> 1000
Metals																
Aluminum	mg/L	0.05	0.05		NLV	NLV	64000		ID	ID	**16[ab]**	**1.2[ab]**	**1.4 J[ab]**	**0.2[ab]**	**3.5 J[ab]**	**29 J[ab]**
Aluminum (dissolved)	mg/L	0.05	0.05		NLV	NLV	64000		ID	ID	-	-	0.032 J	-	-	**11[ab]**
Antimony	mg/L	0.006	0.006	0.13	NLV	NLV	68		ID	ID	0.0015 J	0.002 U	0.002 U	0.00041 J	0.002 U	0.002 U
Antimony (dissolved)	mg/L	0.006	0.006	0.13	NLV	NLV	68		ID	ID	-	-	0.002 U	-	-	0.002 U
Arsenic	mg/L	0.01	0.01	0.01	NLV	NLV	4.3		ID	ID	0.0072	0.0038 J	0.0052	0.00086 J	**0.012[ab,c]**	**0.02[ab,c]**
Arsenic (dissolved)	mg/L	0.01	0.01	0.01	NLV	NLV	4.3		ID	ID	-	-	0.0026 J	-	-	**0.014[ab,c]**
Barium	mg/L	2	2	1.87	NLV	NLV	14000		ID	ID	0.15	0.059 J	0.047 J	0.073 J	0.077 J	0.28
Barium (dissolved)	mg/L	2	2	1.87	NLV	NLV	14000		ID	ID	-	-	0.054 J	-	-	0.15
Beryllium	mg/L	0.004	0.004	0.075	NLV	NLV	290		ID	ID	0.0007 J	0.001 U	0.001 U	0.001 U	0.00022 J	0.0014
Beryllium (dissolved)	mg/L	0.004	0.004	0.075	NLV	NLV	290		ID	ID	-	-	0.001 U	-	-	0.00053 J
Cadmium	mg/L	0.005	0.005	0.006	NLV	NLV	190		ID	ID	0.001 U	0.001 U	0.001 U	0.001 U	0.00014 J	0.00031 J
Cadmium (dissolved)	mg/L	0.005	0.005	0.006	NLV	NLV	190		ID	ID	-	-	0.001 U	-	-	0.001 U
Calcium	mg/L										-	-	-	-	-	-
Chromium	mg/L	0.1	0.1	0.011	NLV	NLV	460		ID	ID	**0.019[c]**	0.0023 J	0.0026 J	0.01 U	0.008 J	**0.053[c]**
Chromium (dissolved)	mg/L	0.1	0.1	0.011	NLV	NLV	460		ID	ID	-	-	0.00075 J	-	-	**0.021[c]**
Chromium III (trivalent)	mg/L	0.1	0.1	0.23	NLV	NLV	290000		ID	ID	-	-	-	-	-	-
Chromium VI (hexavalent)	mg/L	0.1	0.1	0.011	NLV	NLV	460		ID	ID	-	-	-	-	-	-
Cobalt	mg/L	0.04	0.1	0.1	NLV	NLV	2400		ID	ID	0.0051 J	0.00053 J	0.00069 J	0.02 U	0.0028 J	0.019 J
Cobalt (dissolved)	mg/L	0.04	0.1	0.1	NLV	NLV	2400		ID	ID	-	-	0.000099 J	-	-	0.0089 J
Copper	mg/L	1	1	0.029	NLV	NLV	7400		ID	ID	0.011	0.004 U	0.004 U	0.004 U	0.0067 J	**0.034[c]**
Copper (dissolved)	mg/L	1	1	0.029	NLV	NLV	7400		ID	ID	-	-	0.004 U	-	-	0.019
Iron	mg/L	0.3	0.3		NLV	NLV	58000		ID	ID	**12[ab]**	**1.4[ab]**	**1.4[ab]**	0.14 J	**5.2[ab]**	**44[ab]**
Iron (dissolved)	mg/L	0.3	0.3		NLV	NLV	58000		ID	ID	-	-	0.2 U	-	-	**19[ab]**
Lead	mg/L	0.004	0.004	0.059	NLV	NLV	ID		ID	ID	**0.0045[ab]**	0.00092 J	0.00099 J	0.003 U	0.0038	**0.015[ab]**
Lead (dissolved)	mg/L	0.004	0.004	0.059	NLV	NLV	ID		ID	ID	-	-	0.003 U	-	-	**0.0069[ab]**
Magnesium	mg/L	400	1100		NLV	NLV	1000000		ID	ID	-	-	-	-	-	-
Manganese	mg/L	0.05	0.05	6.52	NLV	NLV	9100		ID	ID	**0.15[ab]**	**0.06[ab]**	0.037 J	**0.056[ab]**	**0.072[ab]**	**0.69[ab]**
Manganese (dissolved)	mg/L	0.05	0.05	6.52	NLV	NLV	9100		ID	ID	-	-	0.042 J	-	-	**0.33[ab]**
Mercury	mg/L	0.002	0.002	0.0000013	0.056	0.056	0.056	0.056	ID	ID	0.08 U	0.0002 U	0.0002 U	0.04 U	0.0002 U	0.0002 U
Mercury (dissolved)	mg/L	0.002	0.002	0.0000013	0.056	0.056	0.056	0.056	ID	ID	-	-	0.0002 U	-	-	0.0002 U
Nickel	mg/L	0.1	0.1	0.16	NLV	NLV	74000		ID	ID	0.016 J	0.004 J	0.0021 J	0.0015 J	0.0092 J	0.055
Nickel (dissolved)	mg/L	0.1	0.1	0.16	NLV	NLV	74000		ID	ID	-	-	0.0017 J	-	-	0.028
Potassium	mg/L										-	-	-	-	-	-
Selenium	mg/L	0.05	0.05	0.005	NLV	NLV	970		ID	ID	0.00099 J	0.005 U	0.005 U	0.00064 J	0.005 U	0.0026 J
Selenium (dissolved)	mg/L	0.05	0.05	0.005	NLV	NLV	970		ID	ID	-	-	0.005 U	-	-	0.0019 J
Silver	mg/L	0.034	0.098	0.0002	NLV	NLV	1500		ID	ID	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.000089 J
Silver (dissolved)	mg/L	0.034	0.098	0.0002	NLV	NLV	1500		ID	ID	-	-	0.0002 U	-	-	0.0002 U
Sodium	mg/L	120	350		NLV	NLV	1000000		ID	ID	-	-	-	-	-	-
Thallium	mg/L	0.002	0.002	0.0037	NLV	NLV	13		ID	ID	0.00037 J	0.002 U	0.0002 J	0.002 U	0.00087 J	0.00083 J
Thallium (dissolved)	mg/L	0.002	0.002	0.0037	NLV	NLV	13		ID	ID	-	-	0.00027 J	-	-	0.00051 J
Vanadium	mg/L	0.0045	0.062	0.027	NLV	NLV	970		ID	ID	**0.036[ac]**	0.0029 J	0.0034 J	0.00061 J	**0.01[a]**	**0.078[ab,c]**
Vanadium (dissolved)	mg/L	0.0045	0.062	0.027	NLV	NLV	970		ID	ID	-	-	0.004 U	-	-	**0.028[ac]**
Zinc	mg/L	2.4	5	0.38	NLV	NLV	110000		ID	ID	0.05 U	0.051 U	0.05 U	0.05 U	0.16	0.15 U
Zinc (dissolved)	mg/L	2.4	5	0.38	NLV	NLV	110000		ID	ID	-	-	0.05 U	-	-	0.11 U

TABLE 3.12

PART 201 CRITERIA EXCEEDANCES – DEEP WELLS
2013 RFI REPORT
FORMER GENERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Location		Residential	Non-Residential	Groundwater	Residential	Non-Residential	Groundwater	Water	Flammability and	Acute	*CRA-704D*			*CRA-726D*		
Site Section Designation		Drinking Water	Drinking Water	Surface Water Interface	Groundwater Volatilization to Indoor Air Inhalation	Groundwater Volatilization to Indoor Air Inhalation	Contact	Solubility	Explosivity Screening Levels	Inhalation Screening Levels	*North Perimeter*			*WEST02*		
Sample Identification (GW-17358)		a	b	c	d	e	f	g	h	i	*4/25/2012 042512-JY-1097*	*4/10/2013 041013-JY-075*	*4/11/2013 041113-DR-085*	*4/25/2012 042512-CB-1100*	*4/10/2013 041013-DR-081*	*4/11/2013 041113-DR-087*
Sample Date																
	Units															
PCBs																
Aroclor-1016 (PCB-1016)	mg/L										0.000095 U	0.0001 U	0.0001 U	0.00011 U	0.000098 U	0.000096 U
Aroclor-1221 (PCB-1221)	mg/L										0.000095 U	0.0001 U	0.0001 U	0.00011 U	0.000098 U	0.000096 U
Aroclor-1232 (PCB-1232)	mg/L										0.000095 U	0.0001 U	0.0001 U	0.00011 U	0.000098 U	0.000096 U
Aroclor-1242 (PCB-1242)	mg/L										0.000095 U	0.0001 U	0.0001 U	0.00011 U	0.000098 U	0.000096 U
Aroclor-1248 (PCB-1248)	mg/L										0.000095 U	0.0001 U	0.0001 U	0.00011 U	0.000098 U	0.000096 U
Aroclor-1254 (PCB-1254)	mg/L										0.000036 J	0.0001 U	R	0.000038 J	0.000098 U	0.000096 U
Aroclor-1260 (PCB-1260)	mg/L										0.000095 U	0.0001 U	R	0.00011 U	0.000098 U	0.000096 U
Aroclor-1262 (PCB-1262)	mg/L										0.000095 U	0.0001 U	R	0.00011 U	0.000098 U	0.000096 U
Aroclor-1268 (PCB-1268)	mg/L										0.000095 U	0.0001 U	R	0.00011 U	0.000098 U	0.000096 U
Total PCBs	mg/L	0.0005	0.0005	0.0002	0.045	0.045	0.0033	0.0447	ID	ID	0.000036 J	ND	ND	0.000038 J	ND	ND
General Chemistry																
Cyanide (amenable)	mg/L	0.2	0.2		NLV	NLV	57		ID	ID	-	-	-	-	-	-
Phosphorus	mg/L	63	240	EE	NLV	NLV	ID		ID	ID	-	0.06 J	0.1	-	0.095 J	0.79

Notes

Michigan Part 201 generic clean up criteria (updated September 28, 2012)
ID - Insufficient data to develop criterion
NLV - Hazardous substance is not likely to volatize under most conditions
NA - Criterion or value is not available
EE

Notes:
ND - Not detected
U - Not detected at the associated reporting limit.
J - Estimated concentration.
UJ - Not detected; associated reporting limit is estimated.
R - Rejected

TABLE 3.12

PART 201 CRITERIA EXCEEDANCES – DEEP WELLS
2013 RFI REPORT
FORMER GENERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Location		*CRA-742D*			*CRA-785D*		
Site Section Designation		*WEST04*			*EAST02*		
Sample Identification (GW-17358)		*4/23/2012 042312-DR-1083*	*4/10/2013 041013-DR-071*	*4/11/2013 041113-DR-084*	*4/23/2012 042312-CB-1080*	*4/10/2013 041013-JY-077*	*4/11/2013 041113-DR-086*
Sample Date							
	Units						
Field Parameters							
Turbidity, field	NTU	> 1000	253	> 1000	647	70.1	625
Metals							
Aluminum	mg/L	**270**[ab]	**4.7**[ab]	**17 J**[ab]	**16**[ab]	**1.9**[ab]	**7.9 J**[ab]
Aluminum (dissolved)	mg/L	-	-	0.038 J	-	-	**0.3**[ab]
Antimony	mg/L	0.0023	0.002 U	0.002 U	0.00052 J	0.002 U	0.002 U
Antimony (dissolved)	mg/L	-	-	0.002 U	-	-	0.002 U
Arsenic	mg/L	**0.23**[abc]	0.005	0.0085	0.0041 J	0.0011 J	0.0027 J
Arsenic (dissolved)	mg/L	-	-	0.003 J	-	-	0.00089 J
Barium	mg/L	**2.1**[abc]	0.083 J	0.2	0.17	0.06 J	0.19
Barium (dissolved)	mg/L	-	-	0.067 J	-	-	0.062 J
Beryllium	mg/L	**0.019**[ab]	0.00023 J	0.0009 J	0.00062 J	0.001 U	0.00042 J
Beryllium (dissolved)	mg/L	-	-	0.001 U	-	-	0.001 U
Cadmium	mg/L	**0.0091**[abc]	0.001 U	0.00014 J	0.001 U	0.001 U	0.001 U
Cadmium (dissolved)	mg/L	-	-	0.001 U	-	-	0.001 U
Calcium	mg/L	2400	-	-	36	-	-
Chromium	mg/L	**0.61**[abc]	0.0074 J	**0.032**[c]	**0.026**[c]	0.0039 J	**0.017**[c]
Chromium (dissolved)	mg/L	-	-	0.01 U	-	-	0.0011 J
Chromium III (trivalent)	mg/L	-	-	-	-	-	-
Chromium VI (hexavalent)	mg/L	-	-	-	-	-	-
Cobalt	mg/L	**0.24**[abc]	0.0022 J	0.011 J	0.0056 J	0.00078 J	0.0038 J
Cobalt (dissolved)	mg/L	-	-	0.00015 J	-	-	0.00027 J
Copper	mg/L	**0.5**[c]	0.0054	0.022	0.012	0.004 U	0.017 U
Copper (dissolved)	mg/L	-	-	0.004 U	-	-	0.004 U
Iron	mg/L	**660**[ab]	**5.3**[ab]	**26**[ab]	**14**[ab]	**2**[ab]	**9.3**[ab]
Iron (dissolved)	mg/L	-	-	0.2 U	-	-	**0.42**[ab]
Lead	mg/L	**0.21**[abc]	0.0025 J	**0.0098**[ab]	**0.0048**[ab]	0.0016 J	**0.015**[ab]
Lead (dissolved)	mg/L	-	-	0.003 U	-	-	0.00037 J
Magnesium	mg/L	**730**[a]	-	-	12	-	-
Manganese	mg/L	**15**[abc]	**0.084**[ab]	**0.39**[ab]	**0.2**[ab]	0.041 J	**0.14**[ab]
Manganese (dissolved)	mg/L	-	-	0.011 J	-	-	0.02 J
Mercury	mg/L	**0.00032 J**[c]	0.0002 U	0.0002 U	0.04 U	0.0002 U	0.0002 U
Mercury (dissolved)	mg/L	-	-	0.0002 U	-	-	0.0002 U
Nickel	mg/L	**0.65**[abc]	0.0073 J	0.032	0.019 J	0.0028 J	0.013 J
Nickel (dissolved)	mg/L	-	-	0.02 U	-	-	0.0031 J
Potassium	mg/L	76	-	-	8.4	-	-
Selenium	mg/L	**0.017**[c]	0.005 U	0.0016 J	0.00067 J	0.005 U	0.00071 J
Selenium (dissolved)	mg/L	-	-	0.005 U	-	-	0.005 U
Silver	mg/L	**0.0012**[c]	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Silver (dissolved)	mg/L	-	-	0.0002 U	-	-	0.0002 U
Sodium	mg/L	63	-	-	58	-	-
Thallium	mg/L	**0.0068**[abc]	0.002 U	0.00061 J	0.00059 J	0.002 U	0.0003 J
Thallium (dissolved)	mg/L	-	-	0.00038 J	-	-	0.00023 J
Vanadium	mg/L	**0.96**[abc]	**0.012**[a]	**0.049**[ac]	**0.04**[ac]	**0.0047**[a]	**0.022**[a]
Vanadium (dissolved)	mg/L	-	-	0.004 U	-	-	0.00085 J
Zinc	mg/L	**1.3**[c]	0.05 U	0.093 U	0.05 U	0.056 U	0.12 U
Zinc (dissolved)	mg/L	-	-	0.05 U	-	-	0.05 U

TABLE 3.12

PART 201 CRITERIA EXCEEDANCES – DEEP WELLS
2013 RFI REPORT
FORMER GENERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Location		*CRA-742D*			*CRA-785D*		
Site Section Designation		*WEST04*			*EAST02*		
Sample Identification (GW-17358)		*4/23/2012* *042312-DR-1083*	*4/10/2013* *041013-DR-071*	*4/11/2013* *041113-DR-084*	*4/23/2012* *042312-CB-1080*	*4/10/2013* *041013-JY-077*	*4/11/2013* *041113-DR-086*
Sample Date							
	Units						
PCBs							
Aroclor-1016 (PCB-1016)	mg/L	0.000095 U	0.0001 U	0.000096 U	0.0001 U	0.0001 U	0.00011 U
Aroclor-1221 (PCB-1221)	mg/L	0.000095 U	0.0001 U	0.000096 U	0.0001 U	0.0001 U	0.00011 U
Aroclor-1232 (PCB-1232)	mg/L	0.000095 U	0.0001 U	0.000096 U	0.0001 U	0.0001 U	0.00011 U
Aroclor-1242 (PCB-1242)	mg/L	0.000095 U	0.0001 U	0.000096 U	0.0001 U	0.0001 U	0.00011 U
Aroclor-1248 (PCB-1248)	mg/L	0.000095 U	0.0001 U	0.000096 U	0.0001 U	0.0001 U	0.00011 U
Aroclor-1254 (PCB-1254)	mg/L	0.000095 U	0.0001 U	0.000096 U	0.0001 U	0.0001 U	0.00011 U
Aroclor-1260 (PCB-1260)	mg/L	0.000095 U	0.0001 U	0.000096 U	0.0001 U	0.0001 U	0.00011 U
Aroclor-1262 (PCB-1262)	mg/L	0.000095 U	0.0001 U	0.000096 U	0.0001 U	0.0001 U	0.00011 U
Aroclor-1268 (PCB-1268)	mg/L	0.000095 U	0.0001 U	0.000096 U	0.0001 U	0.0001 U	0.00011 U
Total PCBs	mg/L	ND	ND	ND	ND	ND	ND
General Chemistry							
Cyanide (amenable)	mg/L	-	0.005 U	0.005 U	-	-	-
Phosphorus	mg/L	-	0.21	0.52	-	0.04 J	0.17

Notes

Michigan Part 201 generic clean up criteria (updated September 28, 2012)
ID - Insufficient data to develop criterion
NLV - Hazardous substance is not likely to volatize under most conditions
NA - Criterion or value is not available
EE

Notes:
ND - Not detected
U - Not detected at the associated reporting limit.
J - Estimated concentration.
UJ - Not detected; associated reporting limit is estimated.
R - Rejected

TABLE 3.13

PART 201 CRITERIA EXCEEDANCES - SOIL GAS (ug/m3)
2013 RFI REPORT
FORMER GENERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Sample Location		Vapor Intrusion Shallow Soil (1)		*CRA-809GP*	*CRA-810GP*	*CRA-811GP*	*CRA-811GP*	*CRA-812GP*	*CRA-812GP*	*CRA-813GP*	*CRA-814GP*	*CRA-815GP*
Sample Identification (GS/SG-17358-)		Gas (Sub-Slab) Screening Levels		*043012-DR-004*	*043012-DR-003*	*043012-DR-001*	*043012-DR-002*	*040813-DR-001*	*040813-DR-002*	*050112-DR-007*	*050112-DR-005*	*050212-DR-009*
Sample Date		Residential	Non-Residential	*4/30/2012*	*4/30/2012*	*4/30/2012*	*4/30/2012*	*4/8/2013*	*4/8/2013*	*5/1/2012*	*5/1/2012*	*5/2/2012*
Sample Type		a	b				*Duplicate*					
Volatile Organic Compounds (VOCs)	***Units***											
1,1,1-Trichloroethane	ug/m3	210000	3500000	7.9 U	140 U	1.6 U	1.6 U	8.0 U	7.7 U	1.1 J	8.1	1.6 U
1,1,2-Trichloroethane	ug/m3	56	1100	11 U	190 U	2.2 U	2.2 U	11 U	10 U	2.2 U	2.2 U	2.2 U
1,1-Dichloroethane	ug/m3	17000	290000	5.9 U	110 U	1.9	1.7	5.9 U	5.7 U	1.2 U	1.2 U	1.3
1,1-Dichloroethene	ug/m3	7000	120000	15 U	280 U	3.2 U	3.2 U	16 U	15 U	3.2 U	3.2 U	3.2 U
1,2,4-Trichlorobenzene	ug/m3	140	2300	90 U	1600 U	19 U	19 U	91 U	88 U	19 U	19 U	19 U
1,2-Dibromoethane (Ethylene dibromide)	ug/m3	1.5	30	30 U	540 U	6.1 U	6.1 U	30 U	29 U	6.1 U	6.1 U	6.1 U
1,2-Dichlorobenzene	ug/m3	10000	180000	12 U	210 U	2.4 U	2.4 U	12 U	11 U	2.4 U	2.4 U	2.4 U
1,2-Dichloroethane	ug/m3	35	700	16 U	280 U	3.2 U	3.2 U	16 U	15 U	3.2 U	3.2 U	3.2 U
1,2-Dichloropropane	ug/m3	140	2300	9.0 U	160 U	1.8 U	1.8 U	9.1 U	8.7 U	1.8 U	1.8 U	1.8 U
1,3-Dichlorobenzene	ug/m3	100	1800	12 U	210 U	2.4 U	2.4 U	12 U	11 U	2.4 U	2.4 U	2.4 U
1,4-Dichlorobenzene	ug/m3	130	2600	12 U	210 U	2.4 U	2.4 U	12 U	11 U	2.4 U	2.4 U	2.4 U
2-Butanone (Methyl ethyl ketone) (MEK)	ug/m3	170000	2900000	150	1600	14	18	12 U	11 U	2.5	2.4 U	3.7
2-Hexanone	ug/m3	1100	18000	5.5 J	300	1.3 J	2.1	16 U	16 U	1.6 U	1.6 U	1.6 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	ug/m3	100000	1800000	9.9	300	1.6 U	1.6 U	8.0 U	7.8 U	1.6 U	1.6 U	1.6 U
Acetone	ug/m3	210000	3400000	540	11000	93	110	17	16	15	4.7	42
Benzene	ug/m3	110	2200	36	55 J	4.4	3.8	6.3 U	6.0 U	0.96 U	0.96 U	7.3
Bromodichloromethane	ug/m3	50	1000	9.7 U	180 U	2.0 U	2.0 U	9.8 U	9.5 U	2.0 U	2.0 U	2.0 U
Bromoform	ug/m3	820	17000	20 U	360 U	4.1 U	4.1 U	41 U	39 U	4.1 U	4.1 U	4.1 U
Bromomethane (Methyl bromide)	ug/m3	170	2900	15 U	270 U	3.1 U	3.1 U	15 U	15 U	3.1 U	3.1 U	3.1 U
Carbon disulfide	ug/m3	24000	410000	42	220 U	4.6	4.3	5.0 J	12 U	2.5 U	2.5 U	2.5 U
Carbon tetrachloride	ug/m3	150	3000	24 U	440 U	5.0 U	5.0 U	25 U	24 U	5.0 U	5.0 U	5.0 U
Chlorobenzene	ug/m3	2400	41000	6.7 U	120 U	1.4 U	1.4 U	6.8 U	6.5 U	1.4 U	1.4 U	1.4 U
Chloroethane	ug/m3	350000	5800000	10 U	190 U	2.1 U	2.1 U	19 U	19 U	2.1 U	2.1 U	2.1 U
Chloroform (Trichloromethane)	ug/m3	380	7600	7.1 U	130 U	0.81 J	1.1 J	7.2 U	6.9 U	1.5 U	10	1.9
Chloromethane (Methyl chloride)	ug/m3	1400	29000	8.0 U	150 U	1.7 U	0.63 J	8.1 U	7.8 U	1.7 U	1.7 U	1.7 U
cis-1,2-Dichloroethene	ug/m3	240	4100	15	140 U	1.2 J	1.1 J	7.8 U	7.5 U	1.6 U	1.6 U	4.5
cis-1,3-Dichloropropene	ug/m3	--	--	8.8 U	160 U	1.8 U	1.8 U	8.9 U	8.6 U	1.8 U	1.8 U	1.8 U
Dibromochloromethane	ug/m3	37	740	17 U	300 U	3.4 U	3.4 U	17 U	16 U	3.4 U	3.4 U	3.4 U
Dichlorodifluoromethane (CFC-12)	ug/m3	1700000	29000000	9.6 U	170 U	1.4 J	2.0	9.7 U	9.4 U	3.7	9.6	1.4 J
Ethylbenzene	ug/m3	2900	59000	18	77 J	8.6	8.1	8.5 U	8.2 U	1.7 U	1.7 U	18
Isopropyl alcohol A	ug/m3	--	--	7.9 J	210 J	980 J	1100 J	6100	6100	20 J	1.3 J	1.2 J
Methylene chloride	ug/m3	1900	39000	6.7 U	120 U	1.4 U	3.0	6.8 U	6.6 U	1.4 U	1.4 U	1.4 U
Styrene	ug/m3	1600	32000	8.3 U	150 U	1.7 U	1.7 U	8.3 U	8.1 U	1.7 U	1.7 U	1.7 U
Tetrachloroethene	ug/m3	1200	23000	13 U	240 U	4.2	3.9	13 U	13 U	13	53	8.6
Toluene	ug/m3	170000	2900000	58	130 U	22	18	7.4 U	7.1 U	1.5 U	1.5 U	9.1
trans-1,2-Dichloroethene	ug/m3	2400	41000	49	140 U	1.6 U	1.6 U	7.8 U	7.5 U	1.6 U	1.6 U	1.6 U
trans-1,3-Dichloropropene	ug/m3	--	--	8.8 U	160 U	1.8 U	1.8 U	8.9 U	8.6 U	1.8 U	1.8 U	1.8 U
Trichloroethene	ug/m3	70	1200	60	190 U	2.7	2.4	11 U	10 U	1.7 J	**110[a]**	6.5
Trichlorofluoromethane (CFC-11)	ug/m3	2000000	33000000	11 U	200 U	2.2 U	2.2 U	11 U	11 U	17	1.7 J	2.2 U
Trifluorotrichloroethane (Freon 113)	ug/m3	680000	11000000	15 U	270 U	3.1 U	3.1 U	15 U	14 U	3.1 U	160	7.8
Vinyl chloride	ug/m3	55	4100	**93[a]**	45 U	0.32 J	0.51 U	5.0 U	4.8 U	0.51 U	0.51 U	0.38 J
Xylenes (total)	ug/m3	3500	58000	47	460	29	26	8.5 U	8.2 U	1.7 U	2.3	76

(1) - Guidance Document for the Vapor Intrusion Pathway - MDEQ (Michigan Department of Environmental Quality) - May 2013

ug/m3 - Microgram per cubic meter

Notes:

U - Not detected at the associated reporting limit.

J - Estimated concentration.

TABLE 3.13

PART 201 CRITERIA EXCEEDANCES - SOIL GAS (ug/m3)
2013 RFI REPORT
FORMER GENERAL MOTORS POWERTRAIN WILLOW RUN
YPSILANTI, MICHIGAN

Sample Location		*CRA-816GP*	*CRA-817GP*	*CRA-818GP*	*CRA-819GP*	*CRA-820GP*	*CRA-821GP*	*CRA-822GP*	*CRA-823GP*	*CRA-824GP*	*CRA-825GP*
Sample Identification (GS/SG-17358-)		*050212-DR-008*	*040813-DR-003*	*050212-DR-010*	*050212-DR-011*	*050212-DR-012*	*050212-DR-013*	*050212-DR-014*	*050212-DR-015*	*050112-DR-006*	*050312-DR-016*
Sample Date		*5/2/2012*	*4/8/2013*	*5/2/2012*	*5/2/2012*	*5/2/2012*	*5/2/2012*	*5/2/2012*	*5/2/2012*	*5/1/2012*	*5/3/2012*
Sample Type											
Volatile Organic Compounds (VOCs)	***Units***										
1,1,1-Trichloroethane	ug/m3	1.6 U	1.6 U	25	76 U	22	1.6 U	1.6 U	140 U	88 U	1.6 U
1,1,2-Trichloroethane	ug/m3	2.2 U	2.2 U	22 U	100 U	2.2 U	2.2 U	2.2 U	180 U	120 U	2.2 U
1,1-Dichloroethane	ug/m3	1.2 U	1.4	**56000[a]**	57 U	39	1.2 U	1.2 U	1500	65 U	1.2 U
1,1-Dichloroethene	ug/m3	3.2 U	3.2 U	160	150 U	3.2 U	3.2 U	3.2 U	270 U	170 U	3.2 U
1,2,4-Trichlorobenzene	ug/m3	19 U	19 U	190 U	860 U	19 U	19 U	19 U	1600 U	990 U	19 U
1,2-Dibromoethane (Ethylene dibromide)	ug/m3	6.1 U	6.1 U	61 U	290 U	6.1 U	6.1 U	6.1 U	520 U	330 U	6.1 U
1,2-Dichlorobenzene	ug/m3	2.4 U	2.4 U	24 U	110 U	2.4 U	2.4 U	2.4 U	200 U	130 U	2.4 U
1,2-Dichloroethane	ug/m3	3.2 U	3.2 U	32 U	150 U	3.2 U	3.2 U	3.2 U	270 U	170 U	3.2 U
1,2-Dichloropropane	ug/m3	1.8 U	1.8 U	18 U	86 U	1.8 U	1.8 U	1.8 U	160 U	99 U	1.8 U
1,3-Dichlorobenzene	ug/m3	2.4 U	2.4 U	24 U	110 U	2.4 U	2.4 U	2.4 U	200 U	130 U	2.4 U
1,4-Dichlorobenzene	ug/m3	2.4 U	2.4 U	24 U	110 U	2.4 U	2.4 U	2.4 U	200 U	130 U	2.4 U
2-Butanone (Methyl ethyl ketone) (MEK)	ug/m3	3.7	4.2	24 U	110 U	2.4 U	2.4 U	6.4	200 U	130 U	240
2-Hexanone	ug/m3	1.6 U	3.3 U	16 U	76 U	1.6 U	1.6 U	1.6 U	140 U	88 U	10 J
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	ug/m3	1.6 U	1.2 J	17	76 U	1.6 U	1.6 U	1.6 U	140 U	88 U	120 J
Acetone	ug/m3	23	24	28	89 U	5.8	5.1	57	160 U	120	76 J
Benzene	ug/m3	7.8	1.3 U	9.1 J	45 U	0.96 U	0.96 U	0.56 J	81 U	51 U	2.7 J
Bromodichloromethane	ug/m3	2.0 U	2.0 U	20 U	94 U	2.0 U	2.0 U	2.0 U	170 U	110 U	2.0 U
Bromoform	ug/m3	4.1 U	8.3 U	41 U	190 U	4.1 U	4.1 U	4.1 U	350 U	220 U	4.1 U
Bromomethane (Methyl bromide)	ug/m3	3.1 U	3.1 U	31 U	140 U	3.1 U	3.1 U	3.1 U	260 U	170 U	3.1 U
Carbon disulfide	ug/m3	2.5 U	2.4 J	9.4 J	120 U	2.5 U	2.5 U	1.4 J	210 U	130 U	100 J
Carbon tetrachloride	ug/m3	5.0 U	5.0 U	50 U	230 U	5.0 U	5.0 U	5.0 U	420 U	270 U	5.0 U
Chlorobenzene	ug/m3	0.67 J	1.4 U	14 U	64 U	1.4 U	1.4 U	1.4 U	120 U	74 U	1.4 U
Chloroethane	ug/m3	2.1 U	4.0 U	380	98 U	2.1 U	2.1 U	2.1 U	6900	110 U	2.1 U
Chloroform (Trichloromethane)	ug/m3	1.3 J	1.5 U	15 U	68 U	1.5 U	1.5 U	1.5 U	120 U	78 U	1.5 U
Chloromethane (Methyl chloride)	ug/m3	1.7 U	1.7 U	17 U	77 U	1.7 U	1.7 U	1.7 U	140 U	88 U	1.7 U
cis-1,2-Dichloroethene	ug/m3	3.5	1.6 U	16 U	74 U	1.6 U	1.6 U	1.6 U	130 U	85 U	1.5 J
cis-1,3-Dichloropropene	ug/m3	1.8 U	1.8 U	18 U	85 U	1.8 U	1.8 U	1.8 U	150 U	97 U	1.8 U
Dibromochloromethane	ug/m3	3.4 U	3.4 U	34 U	160 U	3.4 U	3.4 U	3.4 U	290 U	180 U	3.4 U
Dichlorodifluoromethane (CFC-12)	ug/m3	1.3 J	2.0	20 U	92 U	3.4	1.5 J	2.1	170 U	110 U	1.6 J
Ethylbenzene	ug/m3	8.0	1.7 U	6.7 J	81 U	1.7 U	1.7 U	1.7 U	150 U	2800	5.6 J
Isopropyl alcohol A	ug/m3	3.4 J	23	14 J	110 U	6.0 J	7.8 J	9.2 J	210 U	1400 J	10 J
Methylene chloride	ug/m3	0.78 J	1.4 U	14 U	65 U	1.4 U	1.4 U	1.4 U	120 U	74 U	1.4 U
Styrene	ug/m3	1.7 U	1.7 U	17 U	79 U	1.7 U	1.7 U	1.7 U	140 U	91 U	1.7 U
Tetrachloroethene	ug/m3	16	27	27 U	130 U	9.4	5.6	250	230 U	150 U	3.5 J
Toluene	ug/m3	9.6	1.7	39	70 U	2.5	1.5 U	1.5	130 U	52 J	13 J
trans-1,2-Dichloroethene	ug/m3	1.6 U	1.6 U	16 U	74 U	1.6 U	1.6 U	1.6 U	130 U	85 U	1.6 U
trans-1,3-Dichloropropene	ug/m3	1.8 U	1.8 U	18 U	85 U	1.8 U	1.8 U	1.8 U	150 U	97 U	1.8 U
Trichloroethene	ug/m3	25	2.1 J	21 U	100 U	2.1 U	2.1 U	2.1 U	180 U	110 U	2.1 U
Trichlorofluoromethane (CFC-11)	ug/m3	2.2 U	0.88 J	12 J	100 U	1.1 J	2.2 U	1.0 J	190 U	120 U	2.2 U
Trifluorotrichloroethane (Freon 113)	ug/m3	3.1 U	3.1 U	6400	140 U	3.1 U	3.1 U	3.1 U	260 U	160 U	3.1 U
Vinyl chloride	ug/m3	2.9	0.65 J	5.1 U	24 U	0.51 U	0.51 U	0.51 U	**200[a]**	27 U	2.0 J
Xylenes (total)	ug/m3	17	1.7 J	9.2 J	81 U	1.5 J	1.7 U	1.7 U	150 U	**12000[a]**	14 J

(1) - Guidance Document for the Vapor Intrusion Pathway - MDE(
(Michigan Department of Environmental Quality) - May 2013
ug/m3 - Microgram per cubic meter

Notes:
U - Not detected at the associated reporting limit.
J - Estimated concentration.